Cardiovascular and metabolic diseases are the leading cause of death globally. An aggressive approach to their diagnosis and treatment can substantially reduce the risk of mortality and life-threatening complications.

Cardiovascular disease (CVD) is a major health problem across the world, accounting for a third of all deaths worldwide. It is often grouped with metabolic disorders because it is frequently a consequence of diabetes and dyslipidemia. However, the group of disorders specifically related to CVD includes coronary heart disease, cerebrovascular disease, and peripheral arterial disease.

Cardiac biomarker assays have proven to be particularly useful in providing a rapid diagnosis and assessing risk in people with acute coronary syndrome (ACS). Cardiac markers are proteins, hormones, enzymes or other substances expressed by myocardial cells and they are released into the circulating blood upon cell necrosis. Several biomarkers that have become routinely used in the clinic include creatine kinase (CK), creatine kinase-MB (CK-MB), myoglobin, cardiac troponin T (cTnT), and cardiac troponin I (cTnI). To date, the troponins have proven to be the most sensitive and specific indicators of cardiac injury. Other useful biomarkers include NT-proBNP which can help predict an increased risk of recurrent events after a heart arrhythmia. New potential cardiac biomarkers are continually being researched, and advances in functional genomics, proteomics, metabolomics, and bioinformatics have revolutionized the discovery process. In general, using more than one biomarker increases the early predictive value compared to using a single marker and technological advances will increase the use of multi-marker profiling to improve and possibly individualize treatment of CVD in the future.

Metabolic diseases include disorders that disrupt normal metabolism such as diabetes and dyslipidemia (abnormal lipid metabolism). These diseases can be brought on by primary (genetic) factors or secondary factors related to lifestyle, environment, or medication. Metabolic syndrome is a specific collection of conditions that can increase the risk of diabetes, stroke and heart disease and it affects 25% of the adult world population. In the past few years, several expert groups have attempted to set forth simple diagnostic criteria to be used in clinical practice to identify patients with metabolic syndrome. These risk factors include elevated waist circumference, elevated triglycerides, reduced high-density lipoprotein cholesterol, elevated blood pressure and elevated fasting glucose. The magnitude of the increased risk can vary according to which components of the syndrome are present plus the other, non-metabolic syndrome risk factors in a particular person.
<table>
<thead>
<tr>
<th>Letter</th>
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<td>Monocyte Chemotactic Protein 1 (MCP-1/MCAF)</td>
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<td>Myeloperoxidase (MPO)</td>
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<td>Neutrophil Gelatinase-Associated Lipocalin (NGAL)</td>
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<td>Plasminogen Activator Inhibitor 1 (PAI-1)</td>
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<td>Tissue Plasminogen Activator (tPA)</td>
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<td>Von Willebrand Factor (VEF)</td>
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Meridian Life Science, Inc. is a leading large scale manufacturer of:

- Antibodies
- Viral antigens
- Recombinant proteins
- PCR enzymes
- Nucleotides
- Critical assay reagents

Meridian has been providing innovative life science solutions and building trusted partnerships for over 40 years. Meridian’s focus is to offer products and services that help to advance the development of diagnostic assays and vaccine development.

- Commercial scale manufacturing of antigens and antibodies with protein purification expertise
- Full line of immunoassay reagents, including antigens, antibodies and blockers
- Large scale production of reagents for molecular assays
- Technical support with assay development experience
- Dedicated R&D and manufacturing teams
- Robust and mature Quality System

ISO certified
Extensive Capabilities and Services

**Immunodiagnostics**
- Antigens & Antibodies
- Recombinant Proteins
- Blocking Reagents

**Molecular Diagnostics**
- Nucleotides
- enzymes
- qPCR/PCR reagents
- NGS reagents

**Contract Services**
- Antigens & Antibodies
- Cell & Viral Banking
- PCR/qPCR Assay Development

Global Presence

**MERIDIAN BIOSCIENCE, INC.**
Parent Company | Founded in 1977 | Nasdaq: VIVO
Headquartered in Cincinnati, OH | 650+ Employees | Presence in 70+ Countries.

**America**

**MEMPHIS, TN**
Manufacturing & Sales
Viral Antigens
Recombinant Proteins
*In Vitro* Antibodies
HAMA Blocking Reagents

**BILLERICA, MA**
Manufacturing & Sales
LeadCare Diagnostic Product Line

**BOCA RATON, FL**
Manufacturing
Ascites Production
(in BALB/c or CAF1)

**BOSTON, MA**
Sales & Distribution

**Europe**

**LONDON, UK**
PCR Manufacturing & Sales
PCR /qPCR Molecular Reagents

**LUCKENWALDE, GERMANY**
Manufacturing
Large Scale Nucleotides
PCR enzymes

**PARIS, FRANCE**
EU Diagnostics Sales

**WATERLOO, BELGIUM**
EU Diagnostics Sales

**MILAN, ITALY**
EU Diagnostics Sales

**Asia Pacific**

**SYDNEY, AUSTRALIA**
Sales & Distribution
PCR R&D

**SINGAPORE**
Sales & Distribution
Wholly Owned
Subsidiary Office

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Sales & Distribution

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Wholly Owned
Subsidiary Office

**BEIJING, CHINA**
Sales & Distribution
Company Overview

- 3000+ products
- High specificity & sensitivity
- Antibody pairing
- Large lot sizes

Antigens & Antibodies

Infectious disease

**ToRCH**
- Toxo
- Rubella
- CMV
- HSV-1, 2

**TROPICAL**
- Nipah
- Dengue 1, 2, 3, 4
- Chikungunya
- Malaria
- Chagas
- Leishmaniasis
- Leptospirosis
- Japanese Encephalitis Virus
- Newcastle disease
- Yellow Fever
- Zika
- Lyme disease
- Ebola

**CHILDHOOD**
- Mumps
- Rubeola
- EBV
- Coxackie
- Rotavirus
- RSV
- Parvo B19
- VZV

**STDs**
- HAV
- HBV
- HCV
- HSV-1, 2
- HIV-1, 2
- HPV
- Chlamydia
- Neisseria
- Syphilis

**RESPIRATORY**
- RSV
- Influenza A,B
- Parainfluenza
- *Mycoplasma pneumoniae*
- *Chlamydia pneumoniae*
- *Legionella pneumophila*
- *Mycobacterium tuberculosis*
- *Streptococcus*
- *Staphylococcus*
- SARS Coronavirus
- Adenovirus

**FOOD & WATER**
- Hepatitis A
- *Campylobacter jejuni*
- *E. coli*
- Legionella
- Salmonella
- Shigella
- *Bacillus anthracis*
- Clostridium
- Listeria
- *Streptococcus*
- *Staphylococcus*
- Giardia
- *Cryptosporidium*

**GASTROINTESTINAL**
- Norovirus
- Astrovirus
- Adenovirus
- Rotavirus
- *Clostridium difficile*
- *Cryptosporidium*
- *Campylobacter*
- *E. coli*
- Salmonella
- Giardia lamblia
- *H. pylori*
Cancer
- PIVKA-II
- CA125
- CA15-3
- CA19-9
- CA72-4
- CA50
- CA242
- CEA
- Cyfra 21-1
- erbB-2/HER2
- AFP

Cardiac
- Troponin I, T
- Myoglobin
- BNP
- NT-proBNP
- CRP
- PCT
- CK-MB
- Apo A,B,E
- NSE
- FABP
- SAH
- Galectin-3

Immunoglobulins/Blockers
- TRU Block™ & IgM Diluent
- Animal IgGs – Bovine, Chicken, Goat, Mouse, Rabbit, Sheep
- Human IgA, IgG, IgM, IgE
- Kappa Light chain
- Lambda Light chain
- Goat Anti-Human IgG, IgM, IgA
- Goat Anti-Mouse IgG

Hormones
- LH, FSH, hCG, hGH
- AMH
- Cortisol, Estradiol
- Insulin, C-peptide
- Prolactin
- Progesterone
- PTH

Drugs of Abuse
- Amphetamine
- Barbital
- Benzodiazepine
- Buprenorphine
- Cocaine
- Cotinine
- EDDP
- Fentanyl
- Ketamine
- K2
- MDMA (Ecstasy)
- Methadone
- Methamphetamine
- Morphine
- Norketamine
- Opium
- Oxycodone
- PCP
- Phenobarbital
- Propoxyphene
- THC

Autoimmune
- Jo-1
- PCNA
- pANCA
- cANCA
- Sm Ag
- dsDNA
- La (SS-B)
- Ro (SS-A)
- Histone
- GMB
- C1q
- Scl-70
- B2-Gly-1
- Cathepsin G
- Calprotectin

Allergens
- Animal
- Dust Mite
- Mold
- Pollen

www.MeridianBioscience.com/LifeScience
Leading Cardiac Markers

Antibodies & Matched Pairs

Brain Natriuretic Peptide (BNP), ProBNP + NT-ProBNP

- **H86245M** MAb to BNP (Capture), ELISA & WB
- **H86507M** MAb to BNP (Detection), ELISA & WB
  * Recognizes BNP.
- **H86451M** MAb to NT-proBNP a.a. 61-76 (Capture), ELISA & WB
- **H86912M** MAb to NT-proBNP a.a. 1-12 (Detection), ELISA & WB
  * Recognizes BNP, proBNP and NT-proBNP.
- **K4A660R** PAb to BNP (Rabbit) ELISA, RIA, & IHC, lyophilized
- **H01420M** MAb to NT-proBNP a.a. 61-76 (Capture), ELISA & WB
- **H01419M** MAb to NT-proBNP a.a. 15-20 (Detection), ELISA & WB
- **H01423M** MAb to NT-proBNP a.a. 15-20 (Alternate Detection), ELISA & WB
  * Detects NT-proBNP and proBNP.
- **H01422M** MAb to NT-proBNP a.a. 5-12 (Capture), ELISA & WB
- **H01424M** MAb to NT-proBNP a.a. 22-36 (Detection), ELISA & WB
  * Detects NT-proBNP regardless of glycosylation.

C-Reactive Protein (CRP)

- **M86005M** MAb (Capture), ELISA
- **M01239M** MAb (Detection), ELISA
  * Recognizes antigen in the presence and in the absence of Ca²⁺.

Creatine Kinase (CK)

- **MAC01-288** MAb to CK-BB, ELISA
- **H31795M** MAb to CK-MB (Capture/Detection), ELISA & LF
- **K31315G** PAb (Goat) to CK-MM (Capture/Detection), ELISA & LF
  * Abs can be used as capture or detection in a sandwich assay.
- **MAC02-186** MAb to CK-MM, ELISA
  * 50% cross reactivity with CK-MB and < 1% cross reactivity with CK-BB.
- **MAC02-512** MAb to CK-MM, ELISA
  * 52% cross reactivity with CK-MB, and no cross reactivity with CK-BB.

Cystatin C

- **H86023M** MAb (Capture), ELISA
- **H86218M** MAb (Detection), ELISA
- **H86013M** MAb (Alternate Detection)

D-dimer

- **N01265M** MAb, ELISA
- **N01273M** MAb (Capture), ELISA & WB
- **N01274M** MAb (Detection), ELISA & WB
- **N01270M** MAb (Capture), ELISA, LF & WB
- **N01269H** MAb (Detection), ELISA, LF & WB
  * Highly specific for D-dimer and other cross linked fibrin degradation products containing D-dimer, but no reactivity with Fragment D or E. No cross-reaction was found with purified intact fibrinogen or fibrinogen degradation products.
- **N86304M** MAb (Capture), ELISA & WB
- **N86352M** MAb (Detection), ELISA & WB
  * Reacts with high molecular weight fibrin degradation products. Does not cross react with fibrinogen or D-monomer.

Fatty Acid Binding Protein (FABP)

- **H01324M** MAb (Capture), ELISA & LF
- **H01323M** MAb (Detection), ELISA & LF

Fibrinogen

- **N86413M** MAb, ELISA & WB

Galectin-3

- **K01361M** MAb, ELISA, WB & IHC
  * Reacts with human and mouse Galectin-3.
- **K01381M** MAb, ELISA
  * Reacts with human and mouse Galectin-3.

Glycogen Phosphorylase Isoenzyme BB (GPBB)

- **H86807M** MAb, ELISA & WB

Lipoprotein-Associated Phospholipase A2 (Lp-PLA2)

- **H01390M** MAb (Capture), ELISA
- **H01393M** MAb (Detection), ELISA
- **H01389M** MAb (Alternate Detection), ELISA
- **H01392M** MAb (Capture), ELISA
- **H01393M** MAb (Detection), ELISA

C-Reactive Protein (CRP)

- **M86005M** MAb (Capture), ELISA
- **M01239M** MAb (Detection), ELISA
  * Recognizes antigen in the presence and in the absence of Ca²⁺.

Creatine Kinase (CK)

- **MAC01-288** MAb to CK-BB, ELISA
- **H31795M** MAb to CK-MB (Capture/Detection), ELISA & LF
- **K31315G** PAb (Goat) to CK-MM (Capture/Detection), ELISA & LF
  * Abs can be used as capture or detection in a sandwich assay.
- **MAC02-186** MAb to CK-MM, ELISA
  * 50% cross reactivity with CK-MB and < 1% cross reactivity with CK-BB.
- **MAC02-512** MAb to CK-MM, ELISA
  * 52% cross reactivity with CK-MB, and no cross reactivity with CK-BB.
Myeloperoxidase (MPO)
H87207M MAb, ELISA & IHC
* Recognizes both native and recombinant human MPO.

Myoglobin (MYO)
H86142M MAb (Capture), ELISA
H86703M MAb (Detection), ELISA
H01328M MAb (Capture), ELISA & LF
H01327M MAb (Detection), ELISA & LF

Procalcitonin (PCT)
E86561M MAb (Capture), ELISA & WB
E86420M MAb (Detection), ELISA & WB
* Specific to procalcitonin and calcitonin.
E86412M MAb (Capture), ELISA
E86813M MAb (Detection), ELISA
* Specific for procalcitonin and katacalcin.

Pregnancy Associated Plasma Protein A (PAPP-A)
E86141M MAb (Capture), ELISA & WB
E86910M MAb (Detection), ELISA & WB
* Detects both heterotetrameric (found in placental blood) and homodimeric (found in atherosclerotic plaques) PAPP-A.
E86114M MAb, ELISA & WB

S-Adenosyl-Homocysteine (SAH)
K01395C PAb (Chicken), ELISA
* Affinity purified, treated with Adenine-9-D-Ribofuranoside to remove cross reaction to Adenosine.

Soluble CD40 Ligand (sCD40L)
P86106M MAb, ELISA
P42374M MAb, FC & IFA

Troponin I-Cardiac (cTnI)
H86285M MAb to a.a. 86-90 (Capture), ELISA & WB
H01347M MAb to a.a. 24-40 (Detection), ELISA & WB
* Reacts equally with free cTnI and complexed cTnI, does not cross react with sTn.
H01340M MAb to a.a. 41-49, ELISA
H86241M MAb to a.a. 87-91, ELISA & WB
H86596M MAb to a.a. 169-178, ELISA & WB
K31015M MAb (Capture), ELISA
K31341G PAb to a.a. 27-39 (Goat, Detection), ELISA, WB & IHC
K31342G PAb to a.a. 69-86 (Goat, Alternate Detection), ELISA & IHC
* Cross reactivity with sTn is < 0.1% (ELISA).

Troponin T-Cardiac (cTnT)
H86429M MAb to a.a. 60-70 (Capture), ELISA & WB
H86111M MAb to a.a. 95-181 (Detection), ELISA & WB
* Does not cross react with sTn.

Vitamin D
K01214M MAb to Vitamin D (25 OH), ELISA, LF, CLIA & ELISA
* Pairs with antigens A0 169 7B & A0 1698B.
K01213M MAb to Vitamin D (25 OH), ELISA & RIA
* Pairs with antigens A0 1697B & A0 1698B.
K24124M-LQ MAb to 25-OH Vitamin D3, ELISA
K24124M MAb to 25-OH Vitamin D3, ELISA
K24123M MAb to 1,25 (OH)² Vitamin D3, ELISA
* Recognizes Native Human 25 OH Vitamin D2 and 25 OH Vitamin D3.
### Human Antigens (for use as standards, controls & calibrators)

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<tr>
<th>Protein Name</th>
<th>Catalog Number</th>
<th>Description</th>
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<tr>
<td><strong>Brain Natriuretic Peptide (BNP), ProBNP + NT-ProBNP</strong></td>
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<tr>
<td>ProBNP, recombinant protein (E. coli) of N-terminal (a.a. 1-76, MW 8.39 kDa)</td>
<td>A24760H</td>
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<tr>
<td>NT-proBNP, recombinant protein (E. coli) of N-terminal (MW 8.589 kDa). Contains an additional methionine residue at the N-terminus (in comparison with native NT-proBNP)</td>
<td>A01261H</td>
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<td>BNP and NT-proBNP Free Plasma, from normal human plasma, used for preparation of any proBNP-related standards and calibrators</td>
<td>N86583H</td>
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<td>From human fluids and reactive with monospecific goat anti-CRP, ≥ 95% pure (SDS-PAGE)</td>
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<td><strong>Creatine Kinase (CK)</strong></td>
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<td>CK-BB, produced in cell culture (yeast), represents native full length protein and is enzymatically active</td>
<td>VTI830</td>
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<td>CK-MB Isoenzyme Type I, produced in cell culture (yeast), enzymatically active</td>
<td>VTI840</td>
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<td>CK-MB Isoenzyme Type II, produced in cell culture (yeast), represents native full length protein and is enzymatically active</td>
<td>VTI810</td>
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<td>CK-MM Isoenzyme Type I, produced in cell culture (yeast), represents full length protein without the C-terminal lysine on both subunits and is enzymatically active</td>
<td>VTI850</td>
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<tr>
<td>CK-MM Isoenzyme Type III, produced in cell culture (yeast), represents full length protein and is enzymatically active</td>
<td>VTI820</td>
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<tr>
<td><strong>Cystatin-C</strong></td>
<td></td>
<td></td>
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<tr>
<td>From human urine, 95.5% pure</td>
<td>A01259H</td>
<td></td>
</tr>
<tr>
<td>From human urine, ≥ 95% pure (SDS-PAGE), major band at ~13 kDa, suitable for TIA applications</td>
<td>A01435H</td>
<td></td>
</tr>
<tr>
<td><strong>D-Dimer</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From human plasma, &gt; 90% pure</td>
<td>A01408H</td>
<td></td>
</tr>
<tr>
<td>From human plasma, &gt; 95% pure (SDS-PAGE)</td>
<td>A01463H</td>
<td></td>
</tr>
<tr>
<td><strong>Fatty Acid Binding Protein (FABP)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From human heart, &gt; 95% pure (SDS-PAGE)</td>
<td>A86865H</td>
<td></td>
</tr>
<tr>
<td><strong>Fibrinogen</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From human plasma, MW 340kDa, isoelectric point of 5.1–6.3</td>
<td>A95150H</td>
<td></td>
</tr>
<tr>
<td><strong>Lp-PLA2</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recombinant (E.coli), &gt; 95% pure (SDS-PAGE)</td>
<td>A01413H</td>
<td></td>
</tr>
<tr>
<td><strong>Myeloperoxidase (MPO)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From human neutrophils, &gt; 96% pure (SDS-PAGE), approximate activity of 1,100 Units/mg Protein</td>
<td>A38104H</td>
<td></td>
</tr>
<tr>
<td><strong>Myoglobin</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From human heart, ≥ 99% pure (SDS-PAGE)</td>
<td>A38131H</td>
<td></td>
</tr>
<tr>
<td><strong>Pregnancy Associated Plasma Protein A (PAPP-A)</strong></td>
<td></td>
<td></td>
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<tr>
<td>From human retroplacental blood. Heterotetrameric complex consisting of PAPP-A and pro-MBP subunits, &gt; 85% pure (SDS-PAGE), lyophilized</td>
<td>A86864H</td>
<td></td>
</tr>
<tr>
<td><strong>Procalcitonin (PCT)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recombinant protein (E. coli) representing a.a. 3-116 which corresponds to the unprocessed human protein, contains a 6-His tag at N-terminal</td>
<td>A01367H</td>
<td></td>
</tr>
<tr>
<td><strong>Troponin (cTnT &amp; cTnI)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-T-C Complex, from human heart, formed by combining cardiac Troponin T, I and C in a molar ratio of 1:1:1</td>
<td>A86111H</td>
<td></td>
</tr>
<tr>
<td>cTnT, from human heart, &gt; 98% pure (SDS-PAGE)</td>
<td>A86813H</td>
<td></td>
</tr>
<tr>
<td>cTnI, from human heart, &gt; 98% pure (SDS-PAGE), single band ~24 kDa</td>
<td>A38150H</td>
<td></td>
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<tr>
<td><strong>Vitamin D</strong></td>
<td></td>
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<tr>
<td>25-OH Vitamin D3 BSA Conjugate, ≥ 99% Pure (HPLC)</td>
<td>A01694D</td>
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</tr>
<tr>
<td>Vitamin D Biotin Conjugate, &gt; 95.7% Pure (HPLC)</td>
<td>A01698B</td>
<td></td>
</tr>
<tr>
<td>Vitamin D BSA Conjugate</td>
<td>A01697B</td>
<td></td>
</tr>
<tr>
<td>Vitamin D Binding Protein (Gc-Globulin), &gt; 95% Pure (SDS-PAGE)</td>
<td>A50674H</td>
<td></td>
</tr>
<tr>
<td>1,25 Dihydroxy Vitamin D3, &gt; 99% Pure (HPLC)</td>
<td>A01409H</td>
<td></td>
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</tbody>
</table>
Adiponectin

A protein hormone that modulates a number of metabolic processes including glucose regulation and fatty acid oxidation. Low levels of adiponectin are associated with the increased prevalence of obesity-linked cardiovascular disease, including ischemic heart disease and peripheral arterial disease.

Antibody Pairs

- Suitable for use in ELISA
- MAbs produced in vivo

<table>
<thead>
<tr>
<th>CAPTURE</th>
<th>DETECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>H01263M</td>
<td>H01262M</td>
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<tr>
<td>H01286M</td>
<td>H01285M</td>
</tr>
<tr>
<td>H01289M</td>
<td>H01262M</td>
</tr>
<tr>
<td>H01290M</td>
<td>H01263M</td>
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<tr>
<td>H01296M</td>
<td>H01297M</td>
</tr>
<tr>
<td>H01297M</td>
<td>H01296M</td>
</tr>
</tbody>
</table>

Antigens

- Native antigen from pooled human plasma
- Affinity purified, > 95% pure (SDS-PAGE)

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<thead>
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<tr>
<td>H86157M</td>
<td>H86910M</td>
</tr>
<tr>
<td>H86157M</td>
<td>H86611M</td>
</tr>
</tbody>
</table>

Albumin

Hypoalbuminemia is a medical condition in which blood levels of albumin are abnormally low. It is a common condition in patients with heart failure and becomes more prevalent with increasing age and illness. It can be used as an independent predictor of incident heart failure in end-stage renal disease and elderly patients.

Monoclonals

- Recognizes human serum albumin in ELISA
- Produced in vivo

<table>
<thead>
<tr>
<th>CAPTURE</th>
<th>DETECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>H86424M</td>
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</table>
Apolipoprotein A-II (Apo A-II)

Apo A-II is the second most abundant protein of HDL particles and plays an important role in reverse cholesterol transport and lipid metabolism. Apo A-II is mainly produced in the liver and modulates lipoprotein lipase and hepatic triglyceride lipase. The Apo A-II test can be used as an aid in assessing the risk of CVD.

**Polyclonals**

<table>
<thead>
<tr>
<th>CATALOG</th>
<th>SOURCE</th>
<th>FORMAT</th>
<th>APPLICATION</th>
</tr>
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<tbody>
<tr>
<td>K45252G</td>
<td>Goat</td>
<td>Aff.Pur.</td>
<td>EIA, WB</td>
</tr>
<tr>
<td>K45252P</td>
<td>Goat</td>
<td>HRP</td>
<td>EIA, WB</td>
</tr>
<tr>
<td>K01234G</td>
<td>Goat</td>
<td>Monospecific</td>
<td>IEP</td>
</tr>
<tr>
<td>K23600G</td>
<td>Goat</td>
<td>Neat</td>
<td>RID</td>
</tr>
<tr>
<td>K04329G</td>
<td>Goat</td>
<td>Monospecific</td>
<td>IEP</td>
</tr>
<tr>
<td>K97110S</td>
<td>Sheep</td>
<td>Aff.Pur.</td>
<td>EIA, WB</td>
</tr>
</tbody>
</table>

* K04329G & K97110S are specific for ApoA only (not ApoA I)

**Antigens**

- H8P01-767 • Native antigen from apheresis plasma
- Low B12 and low folate

**Angiotensin**

Angiotensin is a peptide hormone that causes vasoconstriction leading to high blood pressure. It is part of the renin-angiotensin system, which is a major target for drugs that lower blood pressure. Angiotensin I is converted to Angiotensin II through the enzyme angiotensin-converting enzyme (ACE). ACE inhibitors are widely used in the treatment of arterial hypertension and cardiovascular diseases.

**Monoclonals**

- Suitable for use in ELISA
- Produced in vivo

<table>
<thead>
<tr>
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<th>APPLICATION</th>
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</thead>
<tbody>
<tr>
<td>E01296M</td>
<td>Angiotensin I</td>
<td>Neat</td>
<td>EIA, WB</td>
</tr>
<tr>
<td>E01297M</td>
<td>Angiotensin II</td>
<td>Neat</td>
<td>EIA, WB</td>
</tr>
</tbody>
</table>

* Does not cross-react with II and III
* Cross-reacts with I and III

**Antigens**

- A01310S • Synthetic antigen (Asn-Arg-Val-Tyr-Val-His-Pro-Phe-OH)
- > 98% pure (HPLC), lyophilized

**Apolipoprotein A-I (Apo A-I)**

Apo A-I is the major protein component of high density lipoprotein (HDL) in plasma and plays a role in lipid metabolism.

**Monoclonals**

- Does not cross-react with Apo A-II or Apo B
- Suitable for use in RIA and ELISA
- Produced in vivo

<table>
<thead>
<tr>
<th>CATALOG</th>
<th>SOURCE</th>
<th>FORMAT</th>
<th>APPLICATION</th>
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<td>Goat</td>
<td>Neat</td>
<td>EIA, WB</td>
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<td>MAC20-029</td>
<td>Goat</td>
<td>Neat</td>
<td>EIA, WB</td>
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<td>Goat</td>
<td>Neat</td>
<td>EIA, WB</td>
</tr>
<tr>
<td>H45404M</td>
<td>Goat</td>
<td>Neat</td>
<td>EIA, WB</td>
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<tr>
<td>H45625M</td>
<td>Goat</td>
<td>Neat</td>
<td>EIA, WB</td>
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</tbody>
</table>

**Apolipoprotein A-II (Apo A-II)**

Apo A-II is the second most abundant protein of HDL particles and plays an important role in reverse cholesterol transport and lipid metabolism. Apo A-II is mainly produced in the liver and modulates lipoprotein lipase and hepatic triglyceride lipase. The Apo A-II test can be used as an aid in assessing the risk of CVD.

**Polyclonals**

<table>
<thead>
<tr>
<th>CATALOG</th>
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<td>K45252G</td>
<td>Goat</td>
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<td>EIA, WB</td>
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<tr>
<td>K45252P</td>
<td>Goat</td>
<td>HRP</td>
<td>EIA, WB</td>
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<tr>
<td>K01234G</td>
<td>Goat</td>
<td>Monospecific</td>
<td>IEP</td>
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<tr>
<td>K23600G</td>
<td>Goat</td>
<td>Neat</td>
<td>RID</td>
</tr>
<tr>
<td>K04329G</td>
<td>Goat</td>
<td>Monospecific</td>
<td>IEP</td>
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<tr>
<td>K97110S</td>
<td>Sheep</td>
<td>Aff.Pur.</td>
<td>EIA, WB</td>
</tr>
</tbody>
</table>

* K04329G & K97110S are specific for ApoA only (not ApoA I)

**Antigens**

- A50216H • Native antigen from human plasma HDL
- > 95% pure (SDS-PAGE)

**Apolipoprotein B (Apo B)**

Apo B is the primary apolipoprotein in LDL particles and high levels of Apo B and occurs in the plasma in two main isoforms, Apo B48 and Apo B100. Apo B48 is a unique protein to chylomicrons from the small intestine and Apo B100 is found in lipoproteins originating from the liver. It is well established that Apo B100 levels are associated with coronary heart disease, and serve as a better predictor of LDL levels.
Apolipoprotein CIII

A protein that regulates both lipoprotein lipase and lecithin-cholesterol acyltransferase and may cause hypertriglyceridemia. Plasma levels of lipoprotein Apo CIII predict coronary heart disease and are associated with metabolic syndrome.

Polyclonals

<table>
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<td>K74140P</td>
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<td>EIA,IB</td>
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<tr>
<td>K74170B</td>
<td>Goat</td>
<td>Biotin</td>
<td>EIA,IB</td>
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<tr>
<td>K97113R</td>
<td>Rabbit</td>
<td>Aff.Pur.</td>
<td>EIA,IB</td>
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</table>

Antigens

- Native Apo B100 from human plasma VLDL
- > 95% pure (SDS-PAGE)

Apolipoprotein CII

A protein that regulates both lipoprotein lipase and lecithin-cholesterol acyltransferase and may cause hypertriglyceridemia. Plasma levels of lipoprotein Apo CII predict coronary heart disease and are associated with metabolic syndrome.

Polyclonals

<table>
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<tr>
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<th>FORMAT</th>
<th>APPLICATION</th>
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<tbody>
<tr>
<td>K74130G</td>
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<td>EIA,IB</td>
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<tr>
<td>K74140G</td>
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<td>K74140P</td>
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<td>EIA,IB</td>
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<td>K74170B</td>
<td>Goat</td>
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<td>EIA,IB</td>
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<tr>
<td>K97113R</td>
<td>Rabbit</td>
<td>Aff.Pur.</td>
<td>EIA,IB</td>
</tr>
</tbody>
</table>

Antigens

- Native antigen from human plasma (VLDL)
- > 95% pure (SDS-PAGE)

Apolipoprotein E (Apo E)

A major component of very low-density lipoproteins (VLDLs) and binds to a specific receptor on liver and peripheral cells. There are 3 major alleles: E3, E4, and E2. E3 is the normal form with normal function, the E2 variant has a reduced ability bind receptors and is associated with a high risk of CVD and the E4 variant is associated with increased levels of LDL-cholesterol and decreased levels of HDL-cholesterol, which is associated with a higher risk of developing coronary artery disease.

Monoclonals

- Reacts with VLDL of human plasma
- Suitable for use in ELISA and IHC
- Produced in vivo, lyophilized

H61529M

Polyclonals

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<tr>
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<th>APPLICATION</th>
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<td>K34005G</td>
<td>Goat</td>
<td>Biotin</td>
<td>EIA,IB</td>
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<tr>
<td>K34007G</td>
<td>Goat</td>
<td>HRP</td>
<td>EIA,IB</td>
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</tbody>
</table>

Antigens

- Native antigen from human plasma VLDL
- > 95% pure (SDS-PAGE)
BNP (B type natriuretic peptide) is a hormone and important biomarker with an established role in the diagnosis of congestive heart failure. Its utility has also been explored in myocardial ischemia and infarction, and in acute pulmonary embolism. When BNP is secreted it is attached to a 76–amino acid N-terminal fragment called NT-proBNP which is biologically inactive. Once released, BNP binds to and activates the atrial natriuretic factor (ANP) receptors.

**Monoclonals**
- Reacts with proBNP, N-terminal
- Suitable for proBNP and NT-proBNP immunoassay

<table>
<thead>
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<tr>
<td>H86010M</td>
<td>a.a. 28-45</td>
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<td>Also works in WB</td>
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<tr>
<td>H86916M</td>
<td>a.a. 46-60</td>
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<td>Also works in WB</td>
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<tr>
<td>H86288M</td>
<td>a.a. 61-76</td>
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</table>

**Antibody Pairs**
- Suitable for use in ELISA and WB
- Specific for Human BNP unless otherwise specified

<table>
<thead>
<tr>
<th>CAPTURE</th>
<th>DETECTION</th>
<th>APPLICATION</th>
</tr>
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<tbody>
<tr>
<td>H86051M</td>
<td>H86245M</td>
<td>proBNP recombinant (E. coli)</td>
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<tr>
<td>H86051M</td>
<td>H86262M</td>
<td>Suitable for enzyme linked fluorescent assay</td>
</tr>
<tr>
<td>H86245M</td>
<td>H86507M</td>
<td>&gt; 95% pure (Silver Staining SDS-PAGE)</td>
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<tr>
<td>H86245M</td>
<td>H86573M</td>
<td>proBNP recombinant (E. coli)</td>
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<tr>
<td>H86051M</td>
<td>H01365M</td>
<td>&gt; 95% pure (SDS-PAGE)</td>
</tr>
<tr>
<td>H01365M</td>
<td>H86507M</td>
<td>proBNP recombinant (E. coli)</td>
</tr>
<tr>
<td>H01365M</td>
<td>H86573M</td>
<td>Suitable for use in ELISA as a calibrator, standard or an immunogen for antibody development</td>
</tr>
<tr>
<td>H86245M</td>
<td>H01255M</td>
<td>Contains one additional Methionine residue at the N-Terminus (in comparison with native proBNP)</td>
</tr>
<tr>
<td>H01365M</td>
<td>H01366M</td>
<td>&gt; 95% pure (Tricine SDS-PAGE)</td>
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<tr>
<td>H86051M</td>
<td>H86915M</td>
<td>proBNP recombinant (E. coli)</td>
</tr>
<tr>
<td>H86451M</td>
<td>H86132M</td>
<td>&gt; 95% pure (HPLC), lyophilized</td>
</tr>
<tr>
<td>H86451M</td>
<td>H86912M</td>
<td>NT-proBNP recombinant (E. coli)</td>
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<tr>
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<td>H86915M</td>
<td>&gt; 95% pure (Silver Staining SDS-PAGE)</td>
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<tr>
<td>H86511M</td>
<td>H86214M</td>
<td>Suitable for enzyme linked fluorescent assay</td>
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<tr>
<td>H01420M</td>
<td>H01422M</td>
<td>NT-proBNP recombinant (E. coli)</td>
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<tr>
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<td>H01419M</td>
<td>Suitable for use in ELISA</td>
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<tr>
<td>H01420M</td>
<td>H01423M</td>
<td>&gt; 95% pure (Tricine SDS-PAGE)</td>
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</table>

**Antigens**
- proBNP recombinant (E. coli)
- NT-proBNP recombinant (E. coli)
- proBNP, C-terminal (synthetic)
- proBNP, N-terminal recombinant (E. coli)
- proBNP, N-terminal recombinant (synthetic)
- proBNP, N-terminal recombinant (synthetic)
- proBNP, N-terminal recombinant (synthetic)
- proBNP, N-terminal recombinant (synthetic)
- proBNP, N-terminal recombinant (synthetic)
- proBNP, N-terminal recombinant (synthetic)

**Polyclonals**

<table>
<thead>
<tr>
<th>CATALOG</th>
<th>SOURCE</th>
<th>FORMAT</th>
<th>APPLICATION</th>
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<tr>
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<td>Rabbit</td>
<td>Purified</td>
<td>EIA, IHC, RIA</td>
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<tr>
<td>K24410R</td>
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<td>Neat</td>
<td>RIA</td>
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**Polypeptides**

<table>
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<tr>
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<th>proBNP recombinant (E. coli)</th>
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</thead>
<tbody>
<tr>
<td>A24108H</td>
<td>proBNP recombinant (E. coli)</td>
</tr>
<tr>
<td>A01455H</td>
<td>proBNP recombinant (E. coli)</td>
</tr>
<tr>
<td>A24810H</td>
<td>proBNP, C-terminal (synthetic)</td>
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<tr>
<td>R01616</td>
<td>NT-proBNP recombinant (E. coli)</td>
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<td>A01261H</td>
<td>NT-proBNP recombinant (E. coli)</td>
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<td>A24607H</td>
<td>NT-proBNP recombinant (E. coli)</td>
</tr>
<tr>
<td>A24760H</td>
<td>proBNP, N-terminal recombinant (E. coli)</td>
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**Antigens**

<table>
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<tr>
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<th>proBNP recombinant (E. coli)</th>
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<tbody>
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</tr>
<tr>
<td>A01455H</td>
<td>proBNP recombinant (E. coli)</td>
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<tr>
<td>A24810H</td>
<td>proBNP, C-terminal (synthetic)</td>
</tr>
<tr>
<td>R01616</td>
<td>NT-proBNP recombinant (E. coli)</td>
</tr>
<tr>
<td>A01261H</td>
<td>NT-proBNP recombinant (E. coli)</td>
</tr>
<tr>
<td>A24607H</td>
<td>proBNP, N-terminal recombinant (synthetic)</td>
</tr>
<tr>
<td>A24760H</td>
<td>proBNP, N-terminal recombinant (E. coli)</td>
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**Polyclonals**

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**Polypeptides**

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<tr>
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<tr>
<td>K24410R</td>
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### Carboxy Methyl Lysine (CML)
A well-characterized glycoxidation product, formed from the oxidation of both carbohydrates and lipids, which accumulates in tissues with age. CML is a biomarker of general oxidative stress which is involved in the pathogenesis of atherosclerosis.

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<td>EIA, WB</td>
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### sCD40 Ligand (sCD40L)
A member of the TNF superfamily primarily expressed on activated T cells. Studies suggest that sCD40L may be at the heart of the atherosclerotic process, specifically playing a role in the inflammatory aspects of atherosclerotic lesion progression, thrombosis and restenosis.

#### Monoclonals
- Suitable for use in ELISA and WB
- Can be used for detection of human sCD40L in serum P86210M

### Collagen Type I & III
Increased myocardial collagen accumulation is present in almost every cardiac disease and plays an important role in the reduced heart function. N-terminal and C-terminal propeptides of Collagen Type I and III are the two major collagen types in the heart and reflect collagen synthesis and degradation. Their role as serum biomarkers for the diagnosis of cardiac fibrosis is being studied.

#### Monoclonals
- Specific for both native and heat denatured human Collagen Type I
- Suitable for ELISA and IHC M1A340M

#### Polyclonals
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### C-peptide & Proinsulin
C-peptide is a combination of amino acids that are a by-product of insulin and the level of this protein indicates how much insulin the pancreas is producing. Studies have shown an association between serum C-peptide levels and risk of cardiovascular-related disease and coronary artery-related mortality among adults without diabetes.

#### Monoclonals
- Reacts with human free C-peptide and Proinsulin
- Suitable for use in ELISA and RIA
- Produced in vivo E01336M E86588M
- Reacts with C-peptide
- Suitable for use in ELISA and RIA E86710M MHP18-601 MHP18-6014 * Biotin conjugated

### C-Reactive Protein (CRP)
CRP is mainly used as a maker of inflammation. High-sensitivity CRP assays can be used for determining the risk of cardiovascular disease, heart attacks, and stroke.

#### Antibody Pairs
- Suitable for use in ELISA, high sensitivity
- MAbs produced in vivo

**CAPTURE** | **DETECTION**
---|---
M86005M | M01239M * Recognizes CRP with or without Ca2+.
M01243M | M01239M * Recognizes CRP with or without Ca2+.
M01331M | M01330M
C-Reactive Protein (CRP) continued

Monoclonals
- Recognizes CRP with or without the presence of Ca²⁺
- Suitable for use in ELISA
- Produced in vivo
  M01238M * Can also be used in IHC and WB
  M66112M
  M66113M
  M86007M * Can also be used in IHC
  M86842B * Biotin conjugated
  M86842M
- Suitable for use in ELISA (Unless otherwise specified)
- Produced in vivo
  M01319B * Biotin conjugated
  M01319M
  M01295M * No applications have been tested

Polyclonals
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<tr>
<td>M01333C</td>
<td>C. Egg</td>
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Antigens
- Recombinant (*P. pastoris*)
- Full length protein with amino acid sequence identical to the native enzyme
- > 95% pure (SDS-PAGE)
- Suitable for use in ELISA
- Native antigen from human brain
- Activity: 730 Units/mL at 37°C (lot dependent)

Creatine Kinase MB (CK-MB)
CK-MB is expressed in heart muscle and it is used in the diagnosis of acute myocardial infarction and possible reinfarction. The half-life of CK-MB in the circulation is relatively short (approximately 12 hours). CK-MB is relatively cardiac-specific, even healthy people may have low concentrations of this isoenzyme in their blood.

Monoclonals
- Suitable for use in ELISA and LF
- Produced in vivo
  H01298M
  H01299M

Antibody Pairs
- Suitable for use in ELISA and LF
- MAbs produced in vivo

Creatine Kinase BB (CK-BB)
CK-BB is found mostly in the brain and increases in response to brain injury, meningitis, abnormal cell growth, severe shock, stroke, hypothermia, or restricted blood flow to the bowel. It is used in creatine kinase test which determines what percentage of the total creatine kinase is due to the type produced by damaged heart muscles (CK-MM).

Monoclonals
- Produced in vivo
  MAC01-288

Creatine Kinase MM (CK-MM)
Found in your skeletal muscle and heart. CK-MM generally rises if you have muscle damage in your heart, brain, or skeleton after a crush injury, seizures, muscular dystrophy, muscle inflammation, or another skeletal muscle disorder. It is used in creatine kinase test which determines what percentage of the total creatine kinase is due to the type produced by damaged heart muscles (CK-MM).
**Creatine Kinase MM (CK-MM) continued**

**Monoclonals**
- Suitable for use in ELISA
- Produced in vivo
- 52% cross-reactivity to CK-MB
- 0% Cross-reactivity to CK-BB

MAC02-186
MAC02-612

**Polyclonals**

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<tr>
<td>K31315G</td>
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* K31315G pairs with MAb to CK-MB H31795M

**Antigens**

VTI850
- Recombinant (*P. pastoris*), Isoenzyme Type I
- Full length protein without the C-terminal lysine on both subunits
- Suitable for use in WB and ELISA

VTI820
- Recombinant (*P. pastoris*), Isoenzyme Type I
- Identical amino acid sequence to native protein
- Suitable for use in ELISA

A31315H
- Native antigen from human skeletal muscle
- > 95% pure (SDS-PAGE)

A38925H
- Native antigen from human heart, lyophilized

**CX3CR1**

A receptor for fractalkine, a novel membrane-bound chemokine that is mainly expressed in endothelial cells in myocardial ischaemia and heart failure. When bound to CX3CR1, fractalkine acts as an adhesion molecule and can enable leucocyte adhesion. Under inflammatory conditions, this bound form can be cleaved to release a soluble chemokine implicated in a number of disease states, including atherosclerosis, glomerulonephritis, and cerebral ischaemia.

**Polyclonals**

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* Extracellular Loop V28

**Cystatin C**

Traditionally used as a biomarker of kidney function, it has recently been studied for its role in predicting new onset or deteriorating CVD. In different cardiovascular conditions, Cystatin C is a sensitive marker for renal dysfunction, a predictor of the development of heart failure, and is independently associated with subsequent CVD and outcome.

**Antibody Pairs**
- Suitable for use in ELISA
- MAbs produced in vivo

CAPTURE | DETECTION
--- | ---
H86023M | H86013M

**Antigens**

A01259H
- Native antigen from human urine
- 95.5% Pure

A01419H
- Native antigen from human urine

**D-Dimer**

D-dimer is a marker of fibrin turnover and elevated levels are indicative of the presence of a clot and have been reported in deep vein thrombosis, pulmonary embolism, disseminated intravascular coagulation, acute aortic dissection, myocardial infarction, malignant diseases, obstetrical complications, third trimester of pregnancy, and surgery. It is a marker for the early diagnosis of acute coronary syndromes and can be used in addition to traditional assessment for myocardial infarction.

**Monoclonals**
- Does not cross-react with fibrinogen and D-monomer (unless noted otherwise)
- Suitable for use in ELISA and WB

N86925M
- Reacts with high molecular weight fibrin degradation products

N86925B
- Biotin conjugated
Endothelin-1 is produced by the endothelium in response to Angiotensin II, inflammatory mediators, and vascular shear stress, this protein is responsible for vasoconstriction, activation of reactive oxygen species, and ventricular remodeling. Clinical trials have demonstrated the potential benefits of endothelin antagonists for patients with essential hypertension, pulmonary hypertension and heart failure.

Monoclonals
- Suitable for IRMA assays and IHC on frozen sections
- Specific for Endothelin ET-1
- Produced in cell culture
H54085M

Epidermal Growth Factor (EGF)

EGF is a growth factor with potential use as cardiac biomarker due to its role in the proliferation of cardiac stem cells. Research suggests that the human heart has an endogenous reserve of cardiac stem cells (CSCs) which can be activated by various growth factors to reconstitute injured myocardium. EGF has shown to significantly promote the proliferation, migration, and wound healing activities of these CSCs in comparison to the other growth factors.

Antigens
VT1880
- Recombinant \((P. pastoris)\)
- Suitable for use in WB
- >95% pure (SDS-PAGE)
A42115H
- Recombinant (E. coli)
- >98% pure (RP-HPLC and SDS-PAGE), lyophilized

Fatty Acid Binding Protein (FABP)

Heart type FABP is a small cytoplasmic protein (15 kDa) released from cardiac myocytes following an ischemic episode. It is an early biomarker for myocardial infarction, detected in the blood within one to three hours of acute coronary syndrome.

Antibody Pairs
- Suitable for use in ELISA
- MAbs produced \(in vivo\)

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<tr>
<td>H01371C</td>
<td>C. Egg</td>
<td>Aff.Pur.</td>
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Antigens

A01408H
- Native antigen from human plasma
- >90% pure (SDS-PAGE and gel-scanning)

A01463H
- Native antigen from human plasma
- Suitable for ELFA
- ≥ 95% pure (SDS-PAGE)

A86870H
- Native antigen from human plasma
- >90% pure (SDS-PAGE and gel-scanning), lyophilized

Endothelial Nitric Oxide Synthase (eNOS)

Nitric oxide synthases are a family of enzymes catalyzing the production of nitric oxide (NO) from L-arginine. eNOS specifically generates NO in blood vessels which serves as a vasoprotective factor enabling endothelial cells to fight off vascular disease. In patients with cardiovascular risk factors such as hypertension, hypercholesterolemia, diabetes mellitus, or chronic smoking, the production of reactive oxygen species is stimulated in the vascular wall leading to eNOS dysfunction and subsequent CVD.

Monoclonals
- Specifically recognizes eNOS phosphorylated at serine 1177
- Suitable for use in ELISA and WB
- Produced \(in vivo\)
Q67250M

Endothelin-1 continued

Antibody Pairs
- Suitable for use in ELISA and WB
- Reactive with D-Dimer and other fibrin degradation products
- MAbs produced \(in vivo\)

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<td>N01274M</td>
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- ≥ 95% pure (SDS-PAGE)

A86870H
- Native antigen from human plasma
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Epidermal Growth Factor (EGF)

EGF is a growth factor with potential use as cardiac biomarker due to its role in the proliferation of cardiac stem cells. Research suggests that the human heart has an endogenous reserve of cardiac stem cells (CSCs) which can be activated by various growth factors to reconstitute injured myocardium. EGF has shown to significantly promote the proliferation, migration, and wound healing activities of these CSCs in comparison to the other growth factors.

Antigens

VT1880
- Recombinant \((P. pastoris)\)
- Suitable for use in WB
- >95% pure (SDS-PAGE)
A42115H
- Recombinant (E. coli)
- >98% pure (RP-HPLC and SDS-PAGE), lyophilized

Fatty Acid Binding Protein (FABP)

Heart type FABP is a small cytoplasmic protein (15 kDa) released from cardiac myocytes following an ischemic episode. It is an early biomarker for myocardial infarction, detected in the blood within one to three hours of acute coronary syndrome.

Antibody Pairs
- Suitable for use in ELISA
- MAbs produced \(in vivo\)

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<td>H01315M</td>
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<tr>
<td>H01324M</td>
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* Also works in LF assays
Fibrinogen/ Fibrinopeptide A

Fibrinogen is a plasma glycoprotein that is essential for blood clotting and has the ability to promote thromboses, or clots, by causing platelets to clump inside blood vessels. A number of studies have shown elevated fibrinogen levels to be a major risk factor for coronary heart disease.

Antibody Pairs
- Suitable for use in ELISA
- For specific fibrinogen detection, pair a capture anti-fibrinopeptide A antibody with a detection anti-fibrinogen antibody
- MAbs produced in vivo

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Ghrelin

Clinical studies suggest a role for ghrelin in the treatment of CHF. Known cardiovascular effects of ghrelin include lowering of peripheral resistance either direct at the vascular level, and/or by modulating sympathetic nervous activity. Gherlin also has potential as a marker of abnormal metabolism in cardiac failure.

Monoclonals
- Suitable for use in ELISA
- Produced in vivo

Glycogen Phosphorylase Isoenzyme BB (GPBB)

GPBB is an isoenzyme of glycogen phosphorylase and a key enzyme of glycogenolysis. It has been suggested as an early marker of acute myocardial infarction and unstable angina.

Monoclonals
- Suitable for use in ELISA and WB
- Produced in vivo

Galectin-3

Galectin-3 is a galactoside-binding protein G that binds to and activates myofibroblasts in damaged heart tissue, leading to collagen synthesis and subsequently problematic fibrosis. It has been correlated with the prognosis in patients with coronary heart failure and the first Galectin-3 biomarker assay was approved by the FDA in 2010.

Monoclonals
- Suitable for use in WB, IHC, IP, and ICC, produced in vivo
- Suitable for use in FC, produced in vivo

Antigens
- Recombinant (E.coli)
- ≥ 95% pure (silver staining SDS-PAGE)

Monoclonals
- Suitable for use in ELISA
- Produced in vivo

E86621M

Glycogen Phosphorylase Isoenzyme BB (GPBB)
Lipoproteins HDL, LDL, VLDL Receptor

Lectin-like Oxidized LDL Receptor-1 (sLOX) Soluble Form

As glucose circulates in the blood, some of it spontaneously binds to hemoglobin to form hemoglobin A1c (HbA1c). The development of specific diabetes complications correlates with glycated hemoglobin (HbA1c), the most accepted measure of chronic glycaemia.

**Monoclonals**
- Suitable for use in sandwich ELISA
- Does not cross-react with HbA10
- Produced in vivo

**H01331M**  *Can also work in indirect ELISA (antigen capture)*

**H01388M**  *Can also work in WB*

**Antibody Pairs**
- Suitable for use in ELISA
- MAbs produced in vivo

**H01291M**  **H01292M**  *H01291M is an MAb to hemoglobin*

**Antigens**
- Native antigen from human erythrocytes
- > 96% HbA1c (HPLC analysis using a Mono S Column)

**Interleukin 8 (IL-8)**

IL-8 is a neutrophil chemokine produced by macrophages, lymphocytes, epithelial cells and endothelial cells, and promotes neutrophil chemotaxis. Studies in patients with CAD have demonstrated that IL-8 may predict cardiovascular events independent of the other cytokines and high sensitivity CRP.

**Antigens**
- Recombinant (*E. coli*, a.a. 1-72)
- > 96% pure (HPLC, FPLC and reducing and non-reducing SDS-PAGE)

**Lipoproteins HDL, LDL, VLDL Receptor**

A major endothelial receptor for oxidized low-density lipoprotein which is believed to play a role in atherosclerosis. Its expression is induced in pro-atherogenic settings including hypertension, hyperlipidemia, and diabetes, and it accumulates in atherosclerotic lesions where it has been strongly linked to plaque rupture. Specifically sLOX-1 levels are elevated in acute coronary syndrome at an early stage, suggesting its usefulness as an early diagnostic marker of acute coronary syndrome.

**Monoclonals**
- Specific for human recombinant sLOX-1 (a.a. 58-273)
- Suitable for use in ELISA and WB
- Produced in vivo

**H86922M**

**Leptin**

A 16-kDa protein hormone that plays a key role in regulating energy intake and energy expenditure, including appetite/hunger and metabolism. It has been proposed that leptin is an important link between obesity and the development of cardiovascular embolism. An association between serum leptin concentrations and various cardiovascular risks, including stroke, chronic heart failure and myocardial infarction has been observed.

**Antigens**
- Recombinant (*E. coli*)
- > 95% pure (RP-HPLC and SDS-PAGE)

**Lipoprotein diagnostics, such as LDL cholesterol and HDL cholesterol, help to diagnose dyslipidemia which is an important risk factor for cardiovascular disease and type II diabetes.**

**Monoclonals**
- MAb to LDL Receptor
- Recognizes an epitope in the region of repeat #1 of the ligand binding region
- Suitable for WB, FC, IFA
- Produced in vivo

**H44070M**

- MAb to LDL Receptor-Related Protein (LRP)
- Will not block ligand binding
- Suitable for use in ELISA, WB, IHC, and FC

**H63650M**
Lipoproteins HDL, LDL, VLDL Receptor continued

Antigens

A94005H
• Native HDL from human plasma
• > 95% of total lipoprotein content by electrophoresis

A95132H
• Native HDL from human normolipidemic plasma
• Devoid of VLDL, IDL and LDL
• Ultracentrifugation at density 1.063–1.210

A95322H
• Native HDL 2 (HDL2) Subfraction from human normolipidemic plasma
• Devoid of VLDL, IDL, LDL, and HDL3
• Ultracentrifugation density at 1.063 - 1.125

A95332H
• Native HDL 3 (HDL3) Subfraction from human normolipidemic plasma
• Devoid of VLDL, IDL, LDL, and HDL2
• Ultracentrifugation density at 1.120–1.21g/mL

A34275H
• Reconstituted HDL from human plasma
• A complex of human Apolipoprotein A-I and 1-palmitoyl-2-oleoyl phosphatidylcholine prepared at a molar ratio of 1 to 100 by the cholate removal method

A95124H
• Native LDL from human plasma
• > 95% pure (total lipoprotein content by electrophoresis)
• Suitable for use in IEP

A34013H
• Native VLDL from human plasma
• Devoid of IDL, LDL, and HDL
• Purification by ultracentrifugation at density 1.006

A50261H
• Native VLDL from human plasma
• > 95% of total lipoprotein content (SDS-PAGE)
• Suitable for use in ELISA and IEP

Lipoprotein-Associated Phospholipase A2 (Lp-PLA2)

Lp-PLA2 is a protein produced by inflammatory cells that circulates mainly with LDL and is responsible for hydrolyzing oxidized phospholipids in LDL. It is highly upregulated in atherosclerotic plaques and is thought to be directly involved in the development of atherosclerosis and plaque rupture.

Monoclonals
• Suitable for use in ELISA
• Produced in cell culture
  H01389M

Antibody Pairs
• Suitable for use in ELISA
• Produced in cell culture
  CAPTURE DETECTION
  H01390M H01393M
  H01390M H01389M
  H01392M H01393M

Polyclonals

<table>
<thead>
<tr>
<th>CATALOG</th>
<th>SOURCE</th>
<th>FORMAT</th>
<th>APPLICATION</th>
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</thead>
<tbody>
<tr>
<td>H01332S</td>
<td>Sheep</td>
<td>Purified</td>
<td>EIA,IHC,WB</td>
</tr>
<tr>
<td>H01333S</td>
<td>Sheep</td>
<td>Aff.Pur.</td>
<td>EIA,IHC,WB</td>
</tr>
</tbody>
</table>

Antigens

A01413H
• Recombinant (E. coli)
• > 95% pure (SDS-PAGE)
• Contains a His-tag

A62924H
• Lp(a) Calibrator
• Sourced from defibrinated human plasma
• Suitable for use in Turbidimetry
Myoglobin (MYO)

Myoglobin is the primary oxygen-carrying pigment of muscle tissue and it is present in high levels in serum when muscle tissue is damaged, such as after a heart attack. Myoglobin achieves its maximal diagnostic sensitivity within 5 hours of symptom onset and is an early marker of acute myocardial infarction. However, in patients with concurrent trauma or renal failure it exhibits poor specificity.

Antibody Pairs

- Suitable for use in ELISA
- Mabs produced in vivo (unless noted otherwise)

**CAPTURE**

<table>
<thead>
<tr>
<th>H31572M</th>
<th>K31015G</th>
</tr>
</thead>
<tbody>
<tr>
<td>H86142M</td>
<td>H86703M</td>
</tr>
<tr>
<td>H31927M</td>
<td>K31015G</td>
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<tr>
<td>H01328M</td>
<td>H01327M</td>
</tr>
<tr>
<td>H86703M</td>
<td>H86142M</td>
</tr>
</tbody>
</table>

* K31015G is a polyclonal (goat)
* H31927 is produced in cell culture
* Also works in LF

Low Density Lipoprotein Receptor-Related Protein (LRP)

LRP is a large multifunctional receptor mediating the clearance of diverse ligands, including selected lipoproteins, various protease inhibitor complexes, and thrombospondin. The range of ligands recognized by LRP suggests that it plays a role in diverse processes including lipid metabolism, cell growth, migration, and tissue invasion.

**Monoclonals**

- Suitable for use in WB, IHC, and FC
- Produced in vivo

<table>
<thead>
<tr>
<th>H63180M</th>
<th>* Specifically reacts with the 515 kDa alpha-chain of human LRP/alpha2</th>
</tr>
</thead>
<tbody>
<tr>
<td>H63080M</td>
<td>* Specific for human light chain of LRP, 86 kDa</td>
</tr>
</tbody>
</table>

Malondialdehyde (MDA)

MDA is a reactive aldehyde produced by the degradation of polyunsaturated lipids and causes oxidative modification of LDL to form malondialdehyde low density lipoprotein (MDA-LDL). MDA-LDL is a sensitive biomarker for ACS patients with unstable angina and acute myocardial infarction. MDA-LDL not only serves as an oxidative stress marker but as a marker of plaque destabilization.

**Monoclonals**

- Suitable for use in ELISA
- Produced in vivo (unless stated otherwise)

<table>
<thead>
<tr>
<th>H87207M</th>
<th>*Also works in WB, IHC, FC and produced in cell culture</th>
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</thead>
<tbody>
<tr>
<td>K86005M</td>
<td>*Also works in WB</td>
</tr>
<tr>
<td>K86006M</td>
<td></td>
</tr>
<tr>
<td>K86016M</td>
<td>*Also works in WB</td>
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**Polyclonals**

<table>
<thead>
<tr>
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<th>APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>K97120G</td>
<td>Goat</td>
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<td>EIA, WB</td>
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<tr>
<td>K97120P</td>
<td>Goat</td>
<td>HRP, Lyophilized</td>
<td>EIA, WB</td>
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Monocyte Chemotactic Protein 1 (MCP-1/MCAF)

MCP-1 is a cytokine produced by macrophages, smooth muscle cells and endothelial cells within atherosclerotic plaques and an important indicator of atherosclerotic plaque burden. Specifically, high levels of MCP-1 have been associated with a poor prognosis and increased risk for death independent of other risk factors in patients with ACS.

**Antigens**

- Recombinant (E. coli)
- Non-glycosylated polypeptide chain containing 76 a.a.
- > 98% pure (RP-HPLC and SDS-PAGE), lyophilized

<table>
<thead>
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<tr>
<td>A01251H</td>
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Myeloperoxidase (MPO)

MPO is a peroxidase enzyme and a marker of inflammation and neutrophil activation during strenuous exercise. In addition, it has been implicated in the oxidation of lipids contained in low-density lipoproteins, infiltration of macrophages and neutrophils, formation of unstable coronary plaques, and plaque rupture. MPO is elevated in patients with coronary artery disease and can serve as a prognostic marker to identify patients with unstable plaques before complete microvascular obstruction.

**Monoclonals**

- Suitable for use in ELISA
- Produced in vivo (unless noted otherwise)

<table>
<thead>
<tr>
<th>H87207M</th>
<th>*Also works in WB, IHC, FC and produced in cell culture</th>
</tr>
</thead>
<tbody>
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<td>*Also works in WB</td>
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<td>K86006M</td>
<td></td>
</tr>
<tr>
<td>K86016M</td>
<td>*Also works in WB</td>
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**Polyclonals**

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<tr>
<td>K50891R</td>
<td>Rabbit</td>
<td>Purified</td>
<td>EIA, IEP, WB</td>
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</tbody>
</table>

Myoglobin (MYO)

Myoglobin is the primary oxygen-carrying pigment of muscle tissue and it is present in high levels in serum when muscle tissue is damaged, such as after a heart attack. Myoglobin achieves its maximal diagnostic sensitivity within 5 hours of symptom onset and is an early marker of acute myocardial infarction. However, in patients with concurrent trauma or renal failure it exhibits poor specificity.

**Antibody Pairs**

- Suitable for use in ELISA
- Mabs produced in vivo (unless noted otherwise)

**CAPTURE**

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<tbody>
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</tr>
<tr>
<td>H86703M</td>
<td>H86142M</td>
</tr>
</tbody>
</table>

* K31015G is a polyclonal (goat)
* H31927 is produced in cell culture
* Also works in LF
Myoglobin (MYO) continued

Neuron Specific Enolase (NSE)

NSE is one of three recognized forms of enolase, an enzyme in the glycolysis pathway. Studies have shown NSE concentrations rise in the cerebrospinal fluid following an ischemic stroke.

Antibody Pairs
- Specific for the gamma subunit without detectable cross-reactivity with the alpha or beta subunits
- Suitable for use in ELISA
- MABs produced in vivo

Antigens
- Native antigen from human brain
- ≥ 95% pure (SDS-PAGE)
- Suitable for use in ELISA and WB

Neutrophil Gelatinase-Associated Lipocalin (NGAL) / Lipocalin-2

A glycoprotein involved in the regulation of cellular apoptosis and the transport of iron across cell membranes. It has recently been implicated in atherosclerosis through its effects on MMP-9, an important mediator of vascular remodelling and plaque instability. Increased levels of NGAL have been found in patients with atherosclerotic plaques and myocardial infarction.

Plasminogen Activator Inhibitor 1 (PAI-1)

PAI-1 is the principal inhibitor of tissue plasminogen activator (tPA) and urokinase Plasminogen Activator (uPA), the activators of plasminogen and fibrinolysis. Increased PAI-1 levels may predispose patients to the formation of atherosclerosis plaques. Clinical evidence suggests that increased PAI-1 levels are associated with atherothrombosis and elevated plasma PAI-1 levels have been identified as a predictor of myocardial infarction.
Platelet Factor IV (PF-IV)
PF-IV is a small cytokine belonging to the CXC chemokine family and is thought to play a role in wound repair and inflammation. Recent studies have demonstrated its potential as a marker of platelet activation in patients with acute MI.

Antigens
A95841H • Native antigen from supernatant of thrombin-activated platelets (human)
• > 95% pure (SDS-PAGE)

Pregnancy Associated Plasma Protein A (PAPP-A)
PAPP-A is a high molecular weight, zinc-binding metalloproteinase that is associated with vulnerable plaques and may predict CVD and mortality. Human PAPP-A antigen purified from placental blood is a heterotetrameric complex (htPAPP-A) consisting of two PAPP-A subunits and two proMBP subunits. Human PAPP-A antigen purified fromtherosclerotic plaques is homodimeric (dPAPP-A) consisting of two PAPP-A subunits.

Monoclonals
• Detects heterotetrameric PAPP-A (htPAPPA), unless noted otherwise
• Suitable for use in ELISA
• MAbS produced in vivo
E86509M
E86509M
E01261M

Antibody Pairs
• Detects heterotetrameric PAPP-A (htPAPPA), unless noted otherwise
• Suitable for use in ELISA
• MAbS produced in vivo

Procalcitonin (PCT)
PCT is a peptide precursor of the hormone calcitonin and has shown promise as a diagnostic marker of acute inflammatory conditions. Specifically it has been implicated as an inflammation marker in early atherosclerosis and in bacterial infections.

Monoclonals
• Suitable for use in ELISA and WB (unless otherwise noted)
• Produced in vivo
E01308M * Biotin conjugated
E86131M * Also detects calcitonin

Antibody Pairs
• Suitable for use in ELISA and WB
• MAbS produced in vivo
CAPTURE DETECTION
E86561M E86494M * Also works in LF assays
E86561M E86420M
E86813M E86112M * Also detects katacalcin
E01291M E86494M * Also detects katacalcin
E01330M E01331M
E01341M E01340M
E01342M E01340M * Also detects katacalcin and works in LF assays
E86412M E86813M
E86813M E86112M
E01342M E01340M

Antigens
A86864H • Native antigen sourced from pooled human retroplacental blood
• Specific for heterotrimeric complex (PAPP-A and pro-MBP subunits)
• Suitable for use in IFA
• > 85% pure (SDS-PAGE), lyophilized

A01684H • Recombinant (human cell line)
• Specific for homodimeric form (dPAPP-A)
• Suitable for use as a standard in ELISA or for antibody production
• > 90% pure (SDS-PAGE)
Serum Amyloid A (SAA) continued

Antigens

A01454H
- Recombinant (E. coli)
- Represents a.a. 1-116, contains no tags
- > 95% pure, lyophilized
- Suitable for use in ELISA
A01367H
- Recombinant (E. coli)
- Represents a.a. 3-116, contains a His-tag
- > 95% pure (SDS-PAGE)
- Suitable for use in ELISA and WB

Procollagen Type III

Procollagen Type III is a precursor molecule of Collagen Type III, a fibrillar collagen that is found in connective tissues such as skin, lung, uterus, intestine and the vascular system, usually in association with type I collagen. Increased serum levels of Procollagen Type III have been associated with atherosclerosis.

Polyclonals

CATALOG SOURCE FORMAT APPLICATION
T40331R Rabbit Purified EIA, IFA, IHC, RIA

Proinsulin

Proinsulin is the prohormone precursor to insulin. In later stages of type 2 diabetes, proinsulin and proinsulin-like molecules are secreted in increasing amounts with insulin. Studies have shown elevated intact proinsulin seems to indicate an advanced stage of β-cell exhaustion and is a highly specific marker for insulin resistance.

Monoclonals

- Does not cross react with human C-peptide
- Suitable for use in ELISA
- MAbs produced in vivo
E83802M
- Does not cross react with human C-peptide
- Suitable for use in ELISA
- MAbs produced in vivo
E83102M

Antibody Pairs

- Does not cross react with human C-peptide
- Suitable for use in ELISA
- MAbs produced in vivo

Relaxin

Relaxin is a peptide hormone that has a variety of actions on reproductive and non-reproductive organs. Recent research has found that relaxin levels are increased in heart failure and correlates with its severity. Relaxin has also been evaluated as a pharmacologic agent for the treatment of patients with acute heart failure.

Monoclonals

- Suitable for use in ELISA and FC
- Produced in cell culture

E24520M  * Specific for Relaxin 1 and does not cross-react with Relaxin 2
E24720M  * Recognizes Relaxin 1 and 2

Renin

Renin is an enzyme released by the kidneys and is part of the renin-angiotensin system, a group of related hormones that act together to regulate blood pressure. A renin assay blood test is performed to find the cause of high blood pressure (hypertension). It is often tested alongside aldosterone (a hormone made by the adrenal glands) in order to obtain a complete understanding of an individual's hormone balance.

Antibody Pairs

- Suitable for use in ELISA
- Produced in cell culture

CAPTURE DETECTION
E01363M  E01364M
E01365M  E01363M
E01365M  E01364M
E01366M  E01364M
E01366M  E01363M
**S-100**

The S-100 family of proteins are involved in the regulation of a number of cellular processes including cell cycle progression and differentiation. Studies have shown that serum measurements of S100-beta maybe useful for the diagnosis and prognosis of acute stroke.

**Monoclonals**

- **Produced in vivo**
- **MEM24-211** * Works in IHC
- **Q86403M** * Recognizes S-100 (beta-beta) and S-100 (alpha-beta), works in WB

**Antibody Pairs**

- Suitable for use in ELISA and IP
- MAbs produced *in vivo*

**Antigens**

- **A86809H** * Native antigen from human brain
  - Contains beta-beta homodimer (S-100b) and alpha-beta heterodimer (S-100a)
  - > 95% pure, lyophilized
  - Suitable for ELISA, as an immunogen for antiserum production and tracer for iodination
- **A86289H** * Native S-100b from human brain
  - > 95% pure, lyophilized
  - Suitable for ELISA, as an immunogen for antiserum production and tracer for iodination

**S-Adenosyl-Homocysteine (SAH)**

SAH is formed by the demethylation of S-adenosyl-L-methionine (SAM) and acts as an intermediate in the synthesis of cysteine and adenosine. It is elevated in CVD and serves as an indicator of various diseases involving vascular dysfunction.

**Polyclonals**

**Serum Amyloid A (SAA)**

SAA is a sensitive marker of acute inflammation that has been implicated in several chronic inflammatory diseases such as amyloidosis, atherosclerosis, and rheumatoid arthritis. A systemic inflammation (manifested by high SAA levels) may promote atherosclerotic plaque destabilization, in addition to exerting a possible direct effect on arterogenesis.

**Antibody Pairs**

- Suitable for use in ELISA and WB
- Recognizes native and recombinant human SAA
- MAbs produced *in vivo*

**Antigens**

- **R01619** * Recombinant (E. coli)
  - 122 a.a. long with N-terminal His tag
  - Suitable for use in ELISA

**Stromal Cell-Derived Factor 1 alpha (SDF-1α)**

SDF-1α is a chemokine produced in two forms, SDF-1α and SDF-1β by alternate splicing of the same gene. Studies have found increased levels of SDF-1α in several cardiac diseases. It has been suggested to be a prognostic marker in atrial fibrillation.

**Antigen**

- **A42028H** * Recombinant (E. coli)
  - >98% pure (RP-HPLC and SDS-PAGE), lyophilized
Thrombin

Thrombin is a multifunctional protease with procoagulant, pro-inflammatory, and pro-apoptotic effects. Thrombin may adversely effect the endothelium and cardiomyocytes, and it has recently emerged as a possible mediator of ischemia-reperfusion injury.

Monoclonals

- Suitable for use in ELISA
- Produced in cell culture

N95905M

Thrombospondin

Thrombospondins belong to the group of matricellular proteins, which are non-structural extracellular matrix proteins that modulate cell–matrix interactions and cell function in injured tissues or tumors. The expression of thrombospondins strongly increases during cardiac stress or injury indicating an important role for them during cardiac remodelling. It specifically has been suggested to be a marker of acute coronary syndrome.

Antigens

A50163H
- Native antigen sourced from human platelets
- >95% pure (SDS-PAGE), lyophilized

Tissue Plasminogen Activator (tPA)

tPA is a serine protease that catalyzes the conversion of plasminogen to plasmin, the major enzyme responsible for clot breakdown. An elevated level of tPA antigen is a proposed marker of increased coronary risk.

Antigens

A50163H
- Native antigen sourced from human platelets
- >95% pure (SDS-PAGE), lyophilized

Tissue Plasminogen Activator (tPA)

Tissue Plasminogen Activator (tPA)

Troponin Complex

Troponin is a complex of three regulatory proteins (Troponin C, Troponin I, and Troponin T) that is integral to muscle contraction in skeletal muscle and cardiac muscle, but not smooth muscle. Troponin I and T are specific to cardiac muscles and are very sensitive and specific markers for unstable angina and myocardial infarction. Troponin C is associated with both cardiac and skeletal muscles and is not used in the diagnosis of myocardial damage.

Antigens

A86608H
- Native antigen from human heart tissue
- >95% pure (SDS-PAGE)

A86111H
- Native antigen from human heart tissue
- Complex of Troponin I-T-C in a molar ratio 1:1:1

Troponin C-Cardiac (cTnC)

cTnC is part of the Troponin Complex and is responsible for binding calcium to activate muscle contraction. In cardiac muscle, cTnC binds to Cardiac Troponin I (cTnI) and Cardiac Troponin T (cTnT), whereas cTnC binds to slow Skeletal Troponin I (ssTnI) and Troponin T (ssTnT) in slow-twitch skeletal muscle.

Antigens

A86857H
- Native antigen from human heart tissue
- >98% pure (SDS-PAGE), lyophilized
- Suitable for use as a standard, immunogen for antisera production, tracer for iodination

Troponin I-Cardiac (cTnI)

As part of the troponin complex, cTnI binds to actin in thin myofilaments to hold the actin-tropomyosin complex in place and is present in cardiac muscle tissue in a single isoform. cTnI has several phosphorylation sites and the pattern of phosphorylation changes in response to disease. Phosphorylated cTnI changes the conformation of the protein and modifies its interaction with other troponins and alters the myofilament response to calcium. Assays for Cardiac Troponins I and T (cTnI and cTnT) have become widely accepted tools for diagnosing acute myocardial infarction.
Monoclonals

- Suitable for use in ELISA and WB
- Reacts equally with free cardiac Troponin I (cTnI) and Complexed cTnI (unless otherwise noted)
- Not affected by phosphorylation
- Produced in vivo

**EPITOPE BINDING**

<table>
<thead>
<tr>
<th>CATALOG</th>
<th>SOURCE</th>
<th>FORMAT</th>
<th>APPLICATION</th>
</tr>
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<tbody>
<tr>
<td>H01250M</td>
<td>a.a. 1-15</td>
<td>* Also works in IHC</td>
<td></td>
</tr>
<tr>
<td>H86008M</td>
<td>a.a. 18-28</td>
<td>* Also works in IHC</td>
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<tr>
<td>H01247M</td>
<td>a.a. 148-158</td>
<td>* Also works in IHC, reacts mostly with free cTnI (not complexed)</td>
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<tr>
<td>H86207B</td>
<td>a.a. 41-49</td>
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<td>a.a. 65-74</td>
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**Antibody Pairs**

- Suitable for use in ELISA
- MAbs produced in vivo (unless otherwise noted)

**CAPTURE**

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<td>H01326M</td>
<td>H01325M</td>
<td>* Also works in LF</td>
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<tr>
<td>H86285M</td>
<td>H01347M</td>
<td>* Also works in WB</td>
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<td>H86625M</td>
<td>H01395M</td>
<td>* Also works in WB</td>
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<td>H01396M</td>
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**Polyclonals**

**CATALOG**

<table>
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<td>K31342G</td>
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<td>Aff.Pur.</td>
<td>EIA,IHC</td>
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</table>

* K31342G reacts with region a.a. 69-86

Antigens

**R01620**
- Recombinant (E. coli)
- > 95% pure (SDS-PAGE, Coomassie staining)
- Suitable for use in ELISA

**A01429H**
- Recombinant (P. pastoris) Complex of cTnI (fragment) and cTnC (full length)
- > 85% pure (determined by SDS-PAGE)
- Suitable for use in ELISA and WB

**A86853H**
- Native antigen from human heart
- > 98% pure (SDS-PAGE)
- Suitable for use in ELISA, as antigen for antisera production, and as a tracer for iodination

**A38150H**
- Native antigen from human heart
- > 98% pure (SDS-PAGE)

**A86860H**
- Calibrator Set using native antigen from human heart
- Calibrators correspond to 0, 0.5, 1, 3, 10, 50, and 100 ng/mL Cardiac Troponin I

Troponin I-Skeletal (sTnI)

The Troponin I subunit sTnI exists in three separate isoforms, two in skeletal muscle fibers and one in cardiac muscle (cTnI). Diagnosis of acute myocardial infarction by Troponin I is dependent on the detection of cTnI only (i.e. the assay should not be cross-reactive to Troponin I-skeletal). Antibodies made against this cardiac isoform are immunologically different from antibodies made against the two skeletal isoforms.

**Antibody Pairs**

- Cross-reactivity with Cardiac Troponin I is < 1.5%
- Suitable for use in ELISA, WB and for immunopurification
- MAbs produced in vivo

**CAPTURE**

<table>
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<tr>
<th>CATALOG</th>
<th>SOURCE</th>
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<tr>
<td>H86121M</td>
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<tr>
<td>H86702M</td>
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**Antigens**

**A86824H**
- Native antigen from human skeletal muscle
- > 95% pure (SDS-PAGE), lyophilized
Troponin T-Cardiac (cTnT)

TnT is a tropomyosin-binding subunit which regulates the interaction of Troponin Complex with thin myo-filaments. Two isoforms of TnT are expressed in human skeletal muscle tissue (sTnI and sTnT) and several isoforms are expressed in cardiac specific tissue (cTnT). Although assays for Cardiac Troponin T (cTnT) and Cardiac Troponin I (cTnI) exhibit similar clinical performance in patients with acute coronary syndromes for diagnosis and risk stratification, there are differences in the release and clearance of these proteins from damaged myocytes. Also cTnT has a higher overall tissue concentration and free cytoplasmic concentrations than cTnI, and appears in blood of patients with acute myocardial infarction as a mixture of complexed (cTnT-I-C) and free cTnT.

Antibody Pairs

- No cross-reactivity with human skeletal Troponin T
- Suitable for use in ELISA and WB
- MAbs produced in vivo

CAPTURE DETECTION
H86111M H01363M
H86111M H86707M
H86111M H86906M
H86429M H86906M
H86429M H86111M
H86429M H86519M

Monoclonals

- Suitable for use in ELISA and IP
- Not cross-reactive with skeletal Troponin T
- Produced in vivo

EPITOPE BINDING
H86914M a.a. 146-160

Antigens

R01645
- Recombinant (E. coli)
- ≥ 95% pure (SDS-PAGE)
- Suitable for use in CLIA

A86813H
- Native antigen from human heart
- >98% pure (SDS-PAGE)
- Suitable for use in ELISA, as antigen for antisera production, and as a tracer for iodination

Tumor Necrosis Factor alpha (TNF-alpha)

TNF-alpha is a cytokine involved in systemic inflammation and implicated in post-ischemic myocardial dysfunction and heart failure. Concentrations of TNF-alpha reflect the impairment of cardiac and renal function in patients with CAD. Metabolic syndrome and diabetes are also associated with higher plasma concentrations of TNF-alpha and its receptors.

Antibody Pairs

- Suitable for use in ELISA and IHC
- Inhibits the biological activity of TNF-alpha in various biological fluids

CAPTURE DETECTION
H86410M H86650M

Antigens

A42301H
- Recombinant (E. coli)
- Represents 157 a.a. of the mature human TNF-alpha and an N-terminal methionine
- > 95% pure (RP-HPLC and SDS-PAGE)

Uroguanylin

Uroguanylin is a novel natriuretic hormone system and participates in the regulation of salt and water homeostasis. It is synthesized as prohormone and requires proteolytic processing similar to the other natriuretic peptides. It is also activated in heart failure, but acts on a different cyclic GMP pathway to ANP and BNP.

Polyclonals

CATALOG SOURCE FORMAT APPLICATION
D01240R Rabbit Neat EIA,IHC,RIA,WB
* D01240R is specific for the circulating form

Vitamin D

Vitamin D is a fat-soluble precursor of the steroid hormone calcitriol that is essential for bone health and mineral metabolism. Total Vitamin D assays measure the level of both 25 OH Vitamin D3 (calcidiol) and 1,25-Dihydroxy Vitamin D3 (calcitriol). Serum 25 OH Vitamin D3 is the most stable circulating form of vitamin D and a low blood level suggests that a person is not getting enough exposure to sunlight or enough dietary vitamin D. 1,25-Dihydroxy Vitamin D3 regulates the expression of hundreds of genes and a low level is indicative of kidney failure.
Von Willebrand Factor (VEF)

VEF is a large multimeric glycoprotein produced by Weibel-Palade bodies. It plays a pivotal role in platelet adhesion and aggregates at sites of high shear rates (e.g., ruptured atherosclerotic plaque lesions) in patients with pre-existing vascular disease.

Polyclonals

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Vitamin D continued

**Antibody and Antigen Pairs**

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<th>ANTIGEN</th>
<th>APPLICATION</th>
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<td>K01214M</td>
<td>A01697B</td>
<td>* Lateral Flow</td>
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<tr>
<td>K01214M</td>
<td>A01698B</td>
<td>* ELISA and RIA</td>
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</tbody>
</table>

**Monoclonals**

- Suitable for use in ELISA
- Produced in cell culture

| K24123M  | * MAb to 1,25 (OH)2 Vitamin D3 |
| K24124M  | * MAb to 25-OH Vitamin D3 Lyophilized |
| K24124M-LQ| * MAb to 25-OH Vitamin D3 Liquid |

**Antigens**

- A01694D  > 99% Pure (HPLC)
- A01694D  25-OH Vitamin D3 BSA Conjugate
- A01409H  > 99% Pure (HPLC)
- A01409H  1,25-Dihydroxy Vitamin D3
- A50674H  > 95% Pure (SDS-PAGE)
- A50674H  Vitamin D Binding Protein (GC Globulin)