

Proteomic Calibration Kits

TRYPTIC DIGEST STANDARDS FOR HPLC, MALDI AND LC/MS CALIBRATION

- ◆ High purity DTT reduced/IAA alkylated proteins digested with TPCK-treated Trypsin
- ◆ Available individually and in kits of low and high protein molecular weight

Focus on Your Proteomic Efforts – Let Us Prepare the Standards

Our Custom Protein Modification Service offers a comprehensive line of Protein Tryptic Digest Test Mixtures intended as instrument calibrations standards in HPLC, MALDI-TOF, and LC/MS. The test mixtures are available in two different kits with well known proteins having masses in the low or high end of the molecular weight scale, that have been digested and lyophilized in vials. The kits form a particularly well suited combination of standards for methods development and validation in proteomic applications. If your research calls for custom protein standards, don't spend your valuable time in the laboratory by modifying the proteins, preparing the digests, and characterizing the standards yourself. Instead, let us provide you with the standard you need in a timely manner.

Lyophilized Peptide Digests Prepared by State-of-the-Art Chemistry

Our standards are made from high purity proteins (exact sources listed for each batch) that have been reduced with dithiothreitol (DTT) and alkylated with iodoacetic acid (IAA) prior to digestion with trypsin (EC 3.4.21.4) treated with L-(tosylamido-2-phenyl)ethyl chloromethyl ketone (TPCK) to inhibit contaminating chymotryptic activity. The enzymatic cleavage is monitored by rapid HPLC to ascertain complete digestion and the enzymatic activity is thereafter quenched by the addition of acetic acid. Each individual protein is finally characterized by HPLC and MALDI-TOF, and a chromatogram and a mass spectrum showing the fragmentation pattern is enclosed with each individual standard.

The standards are packed in vials containing digest of 500 picomoles of protein, and come with complete instructions for dilution and storage. In addition to six-packs of the individual standards, we presently offer low molecular weight and high molecular weight kits containing six different standards in the protein molecular weight ranges 12-40 kDa and 45-160 kDa, respectively.

Low Molecular Weight Digest Kit (One vial of each protein digest)

Protein	Source	kDa	P/N
Cytochrome C	Equine heart	12	9220-931
Lysozyme	Chicken egg white	14	
Haemoglobin	Bovine blood	17	
Myoglobin	Equine skeletal muscle	17	
Carbonic anhydrase	Bovine erythrocytes	29	
Conalbumin	Chicken egg white	40	

High Molecular Weight Digest Kit (One vial of each protein digest)

Protein	Source	kDa	P/N
Ovalbumin	Chicken egg white	45	9220-932
Alpha amylase	Bacillus sp.	50	
Bovine serum albumin	Bovine serum	68	
Catalase	Bovine liver	128	
Lactic dehydrogenase	Rabbit muscle	140	
Immuno- γ -globulin (IgG)	Porcine serum	160	

Individual Protein Digests (Available as 6-packs)

Protein	Source	kDa	P/N
Cytochrome C	Equine heart	12	9220-901
Lysozyme	Chicken egg white	14	9220-902
Haemoglobin	Bovine blood	17	9220-903
Myoglobin	Equine skeletal muscle	17	9220-904
Carbonic anhydrase	Bovine erythrocytes	29	9220-905
Conalbumin	Chicken egg white	40	9220-906
Ovalbumin	Chicken egg white	45	9220-907
Alpha amylase	Bacillus sp.	50	9220-908
Bovine serum albumin	Bovine serum	68	9220-909
Catalase	Bovine liver	128	9220-910
Lactic dehydrogenase	Rabbit muscle	140	9220-911
Immuno- γ -globulin (IgG)	Porcine serum	160	9220-912

The chemical, physical, and toxicological properties of these products have not been thoroughly tested. Vials are individually packed and contain 500 pmol lyophilized digests each. Instructions for dissolving the samples are included. Store at a temperature < 0 °C.