CRYAB ELISA Kit for Human, Mouse, Rat

PRODUCT OVERVIEW

Product Name	CRYAB, ELISA Kit
Full Product Name	Phospho-CRYAB (Ser19) Colorimetric Cell-Based ELISA Kit
Product Gene Name	CRYAB elisa kit
Product Synonym Names	Alpha crystallin B chain; Alpha(B)-crystallin; CRYA2; P23; Rosenthal fiber component; crystallin; alphaB
Species Reactivity	Human, Mouse, Rat
Assay Type	Phospho Cell-Based ELISA
Samples	Researchers plate their cell line of choice
Sensitivity	>=5000 cells/well
Form/Format	Two 96-Well Plates
Preparation and Storage	Store at 4 degree C.
Molecular Weight	20159
OMIM	M28638 Genomic DNA
3D Structure	ModBase 3D Structure for P02511
Reactivity Note	Human: S19, Mouse: S19, Rat: S19
Detection Method	Colorimetric 450 nm
Product Categories/Family for CRYAB elisa kit	Cell Based ELISA Kit
Related Product Information for CRYAB elisa kit	MBS9501287 is a ready-to-use microwell, strip-or-full plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the CRYAB, ELISA Kit target analytes in biological samples. The concentration gradients of the kit standards or positive controls render a theoretical kit detection range in biological research samples containing CRYAB. The ELISA analytical biochemical technique of the MBS9501287 kit is based on CRYAB antibody-CRYAB antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect CRYAB antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, CRYAB. Appropriate sample types may include undiluted body fluids and/or tissue homogenates, secretions. Quality control assays assessing reproducibility identified the intra-assay CV (%) and inter-assay CV(%).
Other Notes	Small volumes of CRYAB elisa kit vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CRYAB. It may not necessarily be applicable to this product.

NCBI GI #	577019571
NCBI GeneID	1410
NCBI Accession #	NP_001276736.1
UniProt Primary Accession #	P02511
UniProt Secondary Accession #	O43416; Q9UC37; Q9UC38; Q9UC39; Q9UC40; Q9UC41; B0YIX0

UniProt Related Accession #	P02511
GenBank Nucleotide #	NM_001289807.1
NCBI Official Full Name	alpha-crystallin B chain isoform 1
NCBI Official Synonym Full Names	crystallin alpha B
NCBI Official Symbol	CRYAB
NCBI Official Synonym Symbols	MFM2; CRYA2; CTPP2; HSPB5; CMD1II; CTRCT16; HEL-S-101
UniProt Protein Name	Alpha-crystallin B chain
UniProt Synonym Protein Names	Alpha(B)-crystallin; Heat shock protein beta-5; HspB5; Renal carcinoma antigen NY-REN-27; Rosenthal fiber component
Protein Family	Alpha-crystallin
UniProt Gene Name	CRYAB
UniProt Synonym Gene Names	CRYA2; HSPB5; HspB5
NCBI Protein Information	alpha-crystallin B chain
NCBI Summary for CRYAB	Mammalian lens crystallins are divided into alpha, beta, and gamma families. Alpha crystallins are composed of two gene products: alpha-A and alpha-B, for acidic and basic, respectively. Alpha crystallins can be induced by heat shock and are members of the small heat shock protein (HSP20) family. They act as molecular chaperones although they do not renature proteins and release them in the fashion of a true chaperone; instead they hold them in large soluble aggregates. Post-translational modifications decrease the ability to chaperone. These heterogeneous aggregates consist of 30-40 subunits; the alpha-A and alpha-B subunits have a 3:1 ratio, respectively. Two additional functions of alpha crystallins are an autokinase activity and participation in the intracellular architecture. The encoded protein has been identified as a moonlighting protein based on its ability to perform mechanistically distinct functions. Alpha-A and alpha-B gene products are differentially expressed; alpha-A is preferentially restricted to the lens and alpha-B is expressed widely in many tissues and organs. Elevated expression of alpha-B crystallin occurs in many neurological diseases; a missense mutation cosegregated in a family with a desmin-related myopathy. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jan 2014]
UniProt Comments for CRYAB	CRYAB: a major structural protein of the eye lens. A member of the small heat shock protein (sHSP also known as the HSP20) family. Alpha-B is expressed in the lens as well as other tissues. Elevated expression of alpha-B crystallin occurs in many neurological diseases; a missense mutation cosegregated in a family with a desmin-related myopathy. Protein type: Chaperone; Heat shock protein Chromosomal Location of Human Ortholog: 11q23.1 Cellular Component: actin filament bundle; axon; cell surface; cytoplasm; cytosol; dendritic spine; extracellular exosome; Golgi apparatus; M band; microtubule cytoskeleton; mitochondrion; myelin sheath; nucleoplasm; nucleus; perikaryon; postsynaptic density; Z disc Molecular Function: identical protein binding; metal ion binding; microtubule binding; protein binding; protein complex binding; protein homodimerization activity; structural constituent of eye lens; unfolded protein binding Biological Process: aging; cellular response to gamma radiation; lens development in camera-type eye; microtubule polymerization or depolymerization; muscle contraction; muscle organ development; negative regulation of amyloid fibril formation; negative regulation of apoptosis; negative regulation of cell growth; negative regulation of cysteine-type endopeptidase activity involved in apoptotic process; negative regulation of gene expression; negative regulation of intracellular transport; negative regulation of protein homooligomerization; negative regulation of reactive oxygen species metabolic process; protein folding; protein homooligomerization; protein stabilization; regulation of cell death; regulation of cellular response to heat; response to estradiol; response to hydrogen peroxide; response to hypoxia; stress-activated MAPK cascade; tubulin folding Disease: Cardiomyopathy, Dilated, 1ii; Cataract 16, Multiple Types; Myopathy, Myofibrillar, 2; Myopathy, Myofibrillar, Fatal Infantile Hypertonic, Alpha-b Crystallin-related

Research Articles on CRYAB	**1.** mRNA levels of HSP family members (HSP70B', HSP72, HSP40/DNAJ, and HSP20/CRYAB) are upregulated by the intracellular MMP3 overload.
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