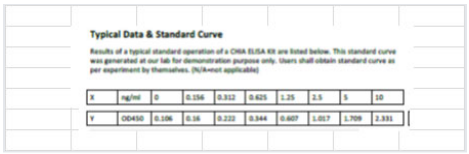
Acidic Mammalian Chitinase (CHIA) ELISA Kit for Human

PRODUCT OVERVIEW

Product Name	Acidic mammalian chitinase (CHIA), ELISA Kit
Full Product Name	Human Acidic mammalian chitinase ELISA Kit
Product Gene Name	CHIA elisa kit
Product Synonym Names	CHIA/Lung-specific protein TSA1902/AMCase
Species Reactivity	Human
Assay Type	Sandwich ELISA, Double Antibody
Samples	Serum, Plasma, Cell Culture Supernatant, cell or tissue lysate, Other liquid samples
Detection Range	0.156-10ng/ml
Sensitivity	0.094ng/ml
Specificity	This assay has high sensitivity and excellent specificity for detection of CHIA. No significant cross-reactivity or interference between CHIA and analogues was observed. Note: Limited by current skills and knowledge, it is difficult for us to complete the crossreactivity detection between CHIA and all the analogues, therefore, cross reaction may still exist.
Preparation and Storage	Store entire kit at 2-8C for short-term. For longer-term, please store the microplate & standard at -20C, while the remaining reagents can be stored at 2-8C
Inter-assay Precision	Inter-assay Precision (Precision between assays): 3 samples with low, middle and high level CHIA were tested on 3 different plates, 8 replicates in each plate. CV (%) = SD/meanX100. Inter-Assay: CV<10%
Intra-assay Precision	Intra-assay Precision (Precision within an assay): 3 samples with low, middle and high level CHIA were tested 20 times on one plate, respectively. Intra-Assay: CV<8%
Molecular Weight	33,906 Da
OMIM	606080
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Related Product Information for CHIA elisa kit	Principle of the Assay: This kit was based on sandwich enzyme-linked immune-sorbent assay technology. Anti-CHIA antibody was pre-coated onto 96-well plates. And the biotin conjugated anti- CHIA antibody was used as detection antibodies. The standards, test samples and biotin conjugated detection antibody were added to the wells subsequently, and washed with wash buffer. HRP- Streptavidin was added and unbound conjugates were washed away with wash buffer. TMB substrates were used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the CHIA amount of sample captured in plate. Read the O.D. absorbance at 450nm in a microplate reader, and then the concentration of CHIA can be calculated.
Other Notes	Small volumes of CHIA 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.
Searchable Terms for CHIA purchase	MBS765987 is a ready-to-use microwell, strip plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Acidic mammalian chitinase (CHIA) 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 CHIA. The ELISA analytical biochemical technique of the MBS765987 kit is based on CHIA antibody-CHIA antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect CHIA antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, CHIA. 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(%).



Typical Standard Curve/Testing Data of CHIA elisa kit

ADDITIONAL DETAILS

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

NCBI GI #	133893286
NCBI GeneID	27159
NCBI Accession #	NP_970615.2
UniProt Secondary Accession #	Q32W79; Q32W80; Q3B866; Q5U5Z5; Q5VUV4; Q86UD8; Q9ULY3; Q9ULY4
UniProt Related Accession #	Q9BZP6
GenBank Nucleotide #	NM_201653.3
NCBI Official Full Name	acidic mammalian chitinase isoform c
NCBI Official Synonym Full Names	chitinase, acidic
NCBI Official Symbol	CHIA
NCBI Official Synonym Symbols	CHIT2; AMCASE; TSA1902
UniProt Protein Name	Acidic mammalian chitinase
UniProt Synonym Protein Names	Lung-specific protein TSA1902
Protein Family	Acidic mammalian chitinase
UniProt Gene Name	CHIA
UniProt Synonym Gene Names	AMCase
UniProt Entry Name	CHIA_HUMAN
NCBI Protein Information	acidic mammalian chitinase
NCBI Summary for CHIA	The protein encoded by this gene degrades chitin, which is found in the cell wall of most fungi as well as in arthropods and some nematodes. The encoded protein can also stimulate interleukin 13 expression, and variations in this gene can lead to asthma susceptibility. Several transcript variants encoding a few different isoforms have been found for this gene. [provided by RefSeq, Apr 2012]

UniProt Comments for CHIA	CHIA: Degrades chitin and chitotriose. May participate in the defense against nematodes, fungi and other pathogens. Plays a role in T-helper cell type 2 (Th2) immune response. Contributes to the response to IL-13 and inflammation in response to IL-13. Stimulates chemokine production by pulmonary epithelial cells. Protects lung epithelial cells against apoptosis and promotes phosphorylation of AKT1. Its function in the inflammatory response and in protecting cells against apoptosis is inhibited by allosamidin, suggesting that the function of this protein depends on carbohydrate binding. Belongs to the glycosyl hydrolase 18 family. Chitinase class II subfamily. 3 isoforms of the human protein are produced by alternative splicing. Protein type: Secreted, signal peptide; EC 3.2.1.14; Hydrolase; Secreted; Carbohydrate Metabolism - amino sugar and nucleotide sugar Chromosomal Location of Human Ortholog: 1p13.2 Cellular Component: cytoplasm; extracellular region; extracellular space Molecular Function: carbohydrate binding; chitin binding; chitinase activity; kinase binding; lysozyme activity Biological Process: apoptosis; carbohydrate metabolic process; cell wall chitin metabolic process; chitin catabolic process; chitin metabolic process; digestion; immune response; polysaccharide catabolic process; production of molecular mediator of acute inflammatory response; response to fungus
Research Articles on CHIA	**1.** These data provide the experimental evidence that telomere shortening and related inflammatory proteins are associated with human IgAN, and it could be a new direction for the disease progression study.
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