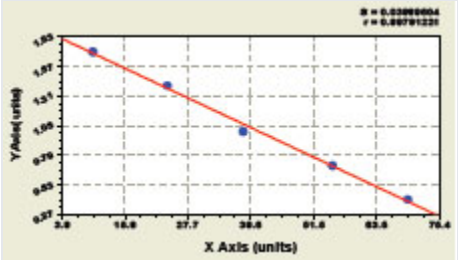
Acid Phosphatase 5, Tartrate Resistant (ACP5) ELISA Kit for Human

PRODUCT OVERVIEW

Product Name	Acid Phosphatase 5, TartRate Resistant (ACP5), ELISA Kit
Full Product Name	Human Acid Phosphatase 5, TartRate Resistant ELISA Kit
Product Gene Name	ACP5 elisa kit
Species Reactivity	Human
Assay Type	Competitive or Sandwich
Samples	Serum, plasma, Cell Culture Supernatants, body fluid and tissue homogenate
Detection Range	2.5-50ng/mL
Sensitivity	0.1ng/mL
Preparation and Storage	Store all reagents at 2-8 degree C.
Molecular Weight	36,599 Da
OMIM	gene 607944
3D Structure	ModBase 3D Structure for P13686
Sample Preparation	We suggest pre-experimenting with neat (undiluted) samples, 1:2 or 1:4 dilutions. Please avoid diluting your samples more than 1:10 as it would exceed the dilution limit set for this kit. If the expected concentration of the target is beyond the detection range of the kit, please contact our technical support team
Product Categories/Family for ACP5 elisa kit	Signal Transduction
ISO Certification	Manufactured in an ISO 13485:2016 Certified Laboratory.
Related Product Information for ACP5 elisa kit	Intended Uses: This TRACP5 ELISA kit is a 1.5 hour solid-phase ELISA designed for the quantitative determination of Human TRACP5. This ELISA kit for research use only! Principle of the Assay||TRACP5 ELISA kit applies the competitive enzyme immunoassay technique utilizing a monoclonal anti-TRACP5 antibody and an TRACP5-HRP conjugate. The assay sample and buffer are incubated together with TRACP5-HRP conjugate in pre-coated plate for one hour. After the incubation period, the wells are decanted and washed five times. The wells are then incubated with a substrate for HRP enzyme. The product of the enzyme-substrate reaction forms a blue colored complex. Finally, a stop solution is added to stop the reaction, which will then turn the solution yellow. The intensity of color is measured spectrophotometrically at 450nm in a microplate reader. The intensity of the color is inversely proportional to the TRACP5 concentration since TRACP5 from samples and TRACP5-HRP conjugate compete for the anti-TRACP5 antibody binding site. Since the number of sites is limited, as more sites are occupied by TRACP5 from the sample, fewer sites are left to bind TRACP5-HRP conjugate. A standard curve is plotted relating the intensity of the color (O.D.) to the concentration of standards. The TRACP5 concentration in each sample is interpolated from this standard curve.
Other Notes	Small volumes of ACP5 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 ACP5 purchase	MBS732325 is a ready-to-use microwell, strip plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Acid Phosphatase 5, TartRate Resistant (ACP5) 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 ACP5. The ELISA analytical biochemical technique of the MBS732325 kit is based on ACP5 antibody-ACP5 antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect ACP5 antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, ACP5. 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 Testing Data/Standard Curve of ACP5 elisa kit

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ACP5. It may not necessarily be applicable to this product.

NCBI GI #	48146273
NCBI GeneID	54
NCBI Accession #	CAG33359.1
UniProt Primary Accession #	P13686
UniProt Secondary Accession #	Q2TAB1; Q6IAS6; Q9UCJ5; Q9UCJ6; Q9UCJ7; A8K3V2
UniProt Related Accession #	P13686
NCBI Official Full Name	ACP5
NCBI Official Synonym Full Names	acid phosphatase 5, tartrate resistant
NCBI Official Symbol	ACP5
NCBI Official Synonym Symbols	TRAP; SPENCDI
UniProt Protein Name	Tartrate-resistant acid phosphatase type 5
UniProt Synonym Protein Names	Tartrate-resistant acid ATPase; TrATPase; Type 5 acid phosphatase
Protein Family	Acyl carrier protein
UniProt Gene Name	ACP5
UniProt Synonym Gene Names	TR-AP; TrATPase
UniProt Entry Name	PPA5_HUMAN
NCBI Protein Information	tartrate-resistant acid phosphatase type 5; TrATPase; tartrate-resistant acid ATPase
NCBI Summary for ACP5	This gene encodes an iron containing glycoprotein which catalyzes the conversion of orthophosphoric monoester to alcohol and orthophosphate. It is the most basic of the acid phosphatases and is the only form not inhibited by L(+)-tartrate. [provided by RefSeq, Aug 2008]

UniProt Comments for ACP5	ACP5: Involved in osteopontin/bone sialoprotein dephosphorylation. Its expression seems to increase in certain pathological states such as Gaucher and Hodgkin diseases, the hairy cell, the B-cell, and the T-cell leukemias. Defects in ACP5 are the cause of spondyloenchondrodysplasia with immune dysregulation (SPENCDI). A disease characterized by vertebral and metaphyseal dysplasia, spasticity with cerebral calcifications, and strong predisposition to autoimmune diseases. The skeletal dysplasia is characterized by radiolucent and irregular spondylar and metaphyseal lesions that represent islands of chondroid tissue within bone. ACP5 inactivating mutations result in a functional excess of phosphorylated osteopontin causing deregulation of osteopontin signaling and consequential autoimmune disease. Belongs to the metallophosphoesterase superfamily. Purple acid phosphatase family. Protein type: Cofactor and Vitamin Metabolism - riboflavin; Motility/polarity/chemotaxis; EC 3.1.3.2; Phosphatase Chromosomal Location of Human Ortholog: 19p13.2 Cellular Component: lysosome; integral to membrane; cytosol Molecular Function: acid phosphatase activity; ferric iron binding; ferrous iron binding Biological Process: negative regulation of interleukin-12 production; vitamin metabolic process; negative regulation of nitric oxide biosynthetic process; response to lipopolysaccharide; negative regulation of tumor necrosis factor production; negative regulation of superoxide release; negative regulation of interleukin-1 beta production; riboflavin metabolic process; defense response to Gram-positive bacterium; dephosphorylation; negative regulation of inflammatory response; response to cytokine stimulus; water-soluble vitamin metabolic process; bone resorption Disease: Spondyloenchondrodysplasia With Immune Dysregulation
Research Articles on ACP5	**1.** TRACP5b has limited utility as a single marker of metabolic bone disease treatment.
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