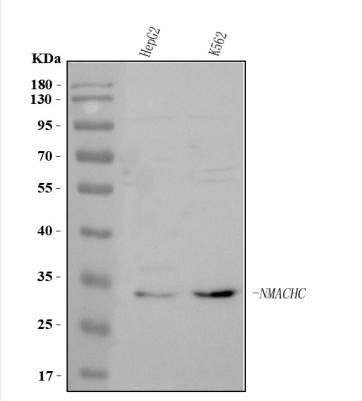
MMACHC Antibody – Rabbit Polyclonal

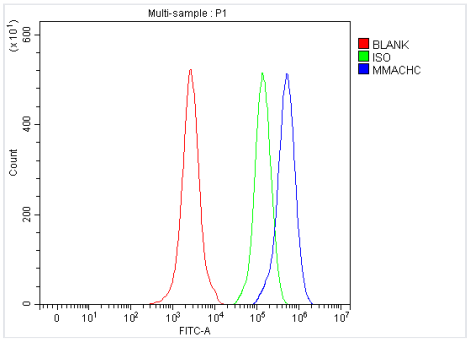
PRODUCT OVERVIEW

Product Name	MMACHC, Polyclonal Antibody
Full Product Name	Anti-MMACHC Antibody Picoband
Product Gene Name	anti-MMACHC antibody
Product Synonym Names	group specific component ; Vitamin D-binding protein; DBP; VDB; Gc-globulin; Group-specific component; Gc
Clonality	Polyclonal
Isotype	Rabbit IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Lyophilized. Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
Purity/Purification	Immunogen affinity purified.
Preparation and Storage	At -20 degree C for one year from date of receipt. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for six months.Avoid repeated freezing and thawing.
Molecular Weight	31,728 Da
OMIM	277400
3D Structure	ModBase 3D Structure for Q9Y4U1
Immunogen	E coli-derived human MMACHC recombinant protein (Position: M1-K242).
Subcellular Localization	Secreted
Reconstitution	Adding 0.2 ml of distilled water will yield a concentration of 500ug/ml.
Cross Reactivity	No cross-reactivity with other proteins.
Protein Function	Involved in vitamin D transport and storage, scavenging of extracellular G-actin, enhancement of the chemotactic activity of C5 alpha for neutrophils in inflammation and macrophage activation.
Product Categories/Family for anti-MMACHC antibody	Primary Antibodies; Actin Binding Proteins; Actin, etc.; Cancer; Cytoskeleton; Cytoskeleton/ECM; Microfilaments; Signal Transduction; Tumor Antigens; Tumor Biomarkers; Tumor Immunology; Tumor-Associated Antigens
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Applications Tested/Suitable for anti-MMACHC antibody	Western Blot (WB), Flow Cytometry (FC/FACS), ELISA (EIA)
Application Notes for anti-MMACHC antibody	WB: 0.25-0.5ug/ml, Human FC/FACS (Fixed): 1-3ug/1x10^6 cells, Human ELISA: 0.1-0.5ug/ml
Related Product Information for anti-MMACHC antibody	The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.

Product References and Citations for anti-MMACHC antibody	1. Ben-Omran, T. I., Wong, H., Blaser, S., Feigenbaum, A. Late-onset cobalamin-C disorder: a challenging diagnosis. Am. J. Med. Genet. 143A: 979-984, 2007.2. Bodamer, O. A. F., Rosenblatt, D. S., Appel, S. H., Beaudet, A. L. Adult-onset combined methylmalonic aciduria and homocystinuria (cblC). Neurology 56: 1113 only, 2001. 3. Collison, F. T., Xie, Y., Gambin, T., Jhangiani, S., Muzny, D., Gibbs, R., Lupski, J. R., Fishman, G. A., Allikmets, R. Whole exome sequencing identifies an adult-onset case of methylmalonic aciduria and homocystinuria type C (clbC) with non-syndromic bull's eye maculopathy. Ophthal. Genet. 36: 270-275, 2015.
Other Notes	Small volumes of anti-MMACHC antibody 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 MMACHC purchase	MBS1758391 is an antibody targeting MMACHC. Also known as Anti-MMACHC Antibody Picoband. Reactive in Human. Host: Rabbit.



Western Blot (WB) of anti-MMACHC antibody
Figure 1. Western blot analysis of MMACHC using anti-MMACHC antibody (MBS1758391).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel)/90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.Lane 1: human HepG2 whole cell lysates,Lane 2: human K562 whole cell lysates.After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-MMACHC antigen affinity purified polyclonal antibody (#MBS1758391) at 0.5ug/mL overnight at 4 degree C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (#MBS176460) with Tanon 5200 system. A specific band was detected for MMACHC at approximately 32 kDa. The expected band size for MMACHC is at 32 kDa.



Flow Cytometry (FC/FACS) of anti-MMACHC antibody
Figure 2. Flow Cytometry analysis of JK cells using anti-MMACHC antibody (MBS1758391).Overlay histogram showing JK cells stained with MBS1758391 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-MMACHC Antibody (MBS1758391, 1ug/1x106 cells) for 30 min at 20 degree C. DyLight488 conjugated goat anti-rabbit IgG (MBS177405, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

ADDITIONAL DETAILS

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

NCBI GI #	153070822
NCBI GeneID	25974
NCBI Accession #	NP_056321.2
UniProt Primary Accession #	Q9Y4U1
UniProt Secondary Accession #	Q5T157; Q9BRQ7
UniProt Related Accession #	Q9Y4U1
GenBank Nucleotide #	NM_015506.2
NCBI Official Full Name	methylmalonic aciduria and homocystinuria type C protein
NCBI Official Synonym Full Names	methylmalonic aciduria (cobalamin deficiency) cblC type, with homocystinuria
NCBI Official Symbol	MMACHC
NCBI Official Synonym Symbols	cblC

UniProt Protein Name	Methylmalonic aciduria and homocystinuria type C protein
Protein Family	Methylmalonic aciduria and homocystinuria type C protein
UniProt Gene Name	MMACHC
UniProt Entry Name	MMAC_HUMAN
NCBI Protein Information	methylmalonic aciduria and homocystinuria type C protein
NCBI Summary for MMACHC	The exact function of the protein encoded by this gene is not known, however, its C-terminal region shows similarity to TonB, a bacterial protein involved in energy transduction for cobalamin (vitamin B12) uptake. Hence, it is postulated that this protein may have a role in the binding and intracellular trafficking of cobalamin. Mutations in this gene are associated with methylmalonic aciduria and homocystinuria type cblC. [provided by RefSeq, Oct 2009]
UniProt Comments for MMACHC	MMACHC: May be involved in the binding and intracellular trafficking of cobalamin (vitamin B12). Defects in MMACHC are the cause of methylmalonic aciduria and homocystinuria type cblC (MMAHCC). A disorder of cobalamin metabolism characterized by decreased levels of the coenzymes adenosylcobalamin (AdoCbl) and methylcobalamin (MeCbl). Affected individuals may have developmental, hematologic, neurologic, metabolic, ophthalmologic, and dermatologic clinical findings. Although considered a disease of infancy or childhood, some individuals develop symptoms in adulthood. Belongs to the MMACHC family. Protein type: Motility/polarity/chemotaxis Chromosomal Location of Human Ortholog: 1p34.1 Cellular Component: mitochondrion; cytosol Molecular Function: protein binding; cobalamin binding Biological Process: vitamin metabolic process; cobalamin metabolic process; cobalamin biosynthetic process; water-soluble vitamin metabolic process Disease: Methylmalonic Aciduria And Homocystinuria, Cblc Type
Research Articles on MMACHC	**1.** HCFC1 plays a role in craniofacial development, which is in part mediated through the regulation of MMACHC expression
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Online datasheet: https://www.mybiosource.com/polyclonal-human-antibody/mmachc/1758391