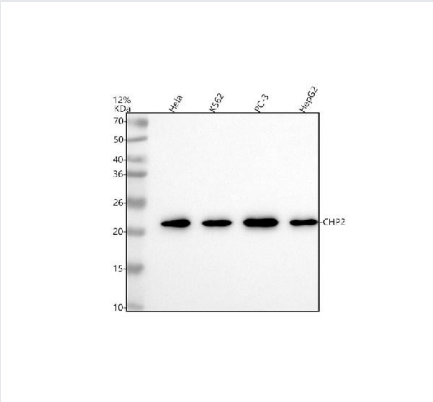
CHP2 Antibody – Rabbit Polyclonal

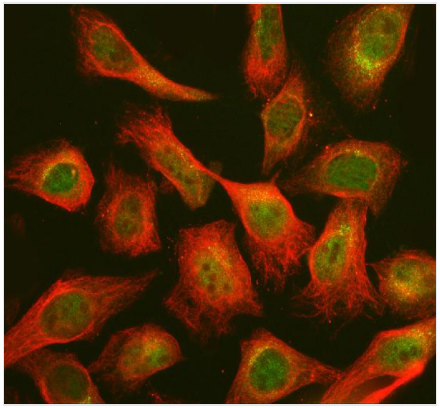
PRODUCT OVERVIEW

Product Name	CHP2, Polyclonal Antibody
Full Product Name	Anti-CHP2 Antibody Picoband
Product Gene Name	anti-CHP2 antibody
Product Synonym Names	Calcineurin B homologous protein 2; calcineurin like EF-hand protein 2; CHP2; HCA520; Calcineurin B homologous protein 2; Hepatocellular carcinoma-associated antigen 520
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	22,452 Da
Chromosome Location	Chromosome: 16; NC_000016.9 (23765948..23770256). Location: 16p12.2
3D Structure	ModBase 3D Structure for O43745
Immunogen	E coli-derived human CHP2 recombinant protein (Position: M1-K196). Human CHP2 shares 81.6% amino acid (aa) sequence identity with both mouse and rat CHP2.
Reconstitution	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Cross Reactivity	No cross-reactivity with other proteins
Product Categories/Family for anti-CHP2 antibody	Primary Antibodies
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Applications Tested/Suitable for anti-CHP2 antibody	Western Blot (WB), Immunocytochemistry (ICC), Immunofluorescence (IF), Flow Cytometry (FC/FACS), ELISA (EIA)
Application Notes for anti-CHP2 antibody	WB: 0.25-0.5ug/ml, Human ICC/IF: 5ug/ml, Human FC/FACS (Fixed): 1-3ug/1x10^6 cells, Human ELISA: 0.1-0.5ug/ml
Related Product Information for anti-CHP2 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.
Other Notes	Small volumes of anti-CHP2 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 CHP2 purchase	MBS1760156 is an antibody targeting CHP2. Also known as Anti-CHP2 Antibody Picoband. Reactive in Human. Host: Rabbit.



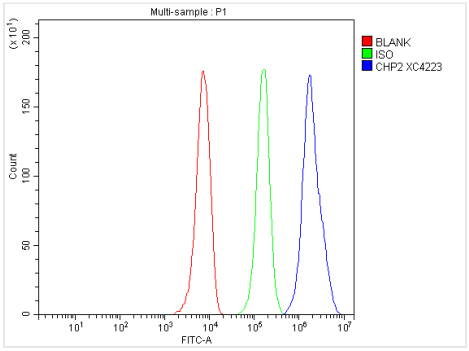
Western Blot (WB) of anti-CHP2 antibody

Figure 1. Western blot analysis of CHP2 using anti-CHP2 antibody (MBS1760156).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 Hela whole cell lysates,Lane 2: human K562 whole cell lysates,Lane 3: human PC-3 whole cell lysates,Lane 4: human HepG2 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-CHP2 antigen affinity purified polyclonal antibody (MBS1760156) 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 CHP2 at approximately 22 kDa. The expected band size for CHP2 is at 22 kDa.



Immunofluorescence (IF) of anti-CHP2 antibody

Figure 2. IF analysis of CHP2 using anti-CHP2 antibody (MBS1760156) and anti-Beta Tubulin antibody (M01857-3).CHP2 was detected in an immunocytochemical section of Hela cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (#MBS176582) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5ug/mL rabbit anti-CHP2 Antibody (MBS1760156) and mouse anti-Beta Tubulin antibody (M01857-3) overnight at 4 degree C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (MBS177405) and DyLight®594 Conjugated Goat Anti-Mouse IgG (BA1141) were used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37 degree C. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Flow Cytometry (FC/FACS) of anti-CHP2 antibody

Figure 3. Flow Cytometry analysis of HepG2 cells using anti-CHP2 antibody (MBS1760156).Overlay histogram showing HepG2 cells stained with MBS1760156 (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-CHP2 Antibody (MBS1760156, 1ug/1x106 cells) for 30 min at 20 degree C. DyLight®488 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 without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CHP2. It may not necessarily be applicable to this product.

NCBI GI #	11545811
NCBI GeneID	63928
NCBI Accession #	NP_071380.1
UniProt Primary Accession #	O43745
UniProt Related Accession #	O43745

GenBank Nucleotide #	NM_022097.2
NCBI Official Full Name	calcineurin B homologous protein 2
NCBI Official Synonym Full Names	calcineurin-like EF-hand protein 2
NCBI Official Symbol	CHP2
UniProt Protein Name	Calcineurin B homologous protein 2
UniProt Synonym Protein Names	Hepatocellular carcinoma-associated antigen 520
Protein Family	Calcineurin B homologous protein
UniProt Gene Name	CHP2
UniProt Synonym Gene Names	HCA520
UniProt Entry Name	CHP2_HUMAN
NCBI Protein Information	calcineurin B homologous protein 2; calcineurin-like EF hand protein 2; hepatocellular carcinoma antigen gene 520; hepatocellular carcinoma-associated antigen 520
NCBI Summary for CHP2	This gene product is a small calcium-binding protein that regulates cell pH by controlling plasma membrane-type Na+/H+ exchange activity. This protein shares sequence similarity with calcineurin B and can bind to and stimulate the protein phosphatase activity of calcineurin A (CnA) and functions in the calcineurin/NFAT (nuclear factor of activated T cells) signaling pathway. Another member of the CHP subfamily, Calcineurin B homologous protein 1, is located on Chromosome 15 and is an inhibitor of calcineurin activity and has a genetic phenotype associated with Parkinson's Disease (OMIM:606988). This gene was initially identified as a tumor-associated antigen and was previously referred to as Hepatocellular carcinoma-associated antigen 520. [provided by RefSeq, Jul 2013]
UniProt Comments for CHP2	CHP2: Functions as an integral cofactor in cell pH regulation by controlling plasma membrane-type Na(+)/H(+) exchange activity. Binds to and activates SLC9A1/NHE1 in a serum-independent manner, thus increasing pH and protecting cells from serum deprivation- induced death. Also plays a role in the regulation of cell proliferation and tumor growth by increasing the phosphatase activity of PPP3CA in a calcium-dependent manner. Activator of the calcineurin/NFAT signaling pathway. Involved in the cytoplasmic translocation of the transcription factor NFATC3 to the nucleus. Belongs to the calcineurin regulatory subunit family. CHP subfamily. Chromosomal Location of Human Ortholog: 16p12.2 Cellular Component: cytoplasm; plasma membrane; nucleus Molecular Function: protein binding; calcium ion binding Biological Process: protein transport; positive regulation of protein import into nucleus; positive regulation of cell proliferation; positive regulation of transcription from RNA polymerase II promoter
Research Articles on CHP2	**1.** chp2 expression in leukemia primary cells and leukemia cell lines is significantly increased.
Precautions	All of MyBioSource's Products are for scientific laboratory research purposes and are not for diagnostic, therapeutics, prophylactic or in vivo use. Through your purchase, you expressly represent and warrant to MyBioSource that you will properly test and use any Products purchased from MyBioSource in accordance with industry standards. MyBioSource and its authorized distributors reserve the right to refuse to process any order where we reasonably believe that the intended use will fall outside of our acceptable guidelines.
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Product Note	Select online data sheet information is drawn from bioinformatics databases, occasionally resulting in ambiguous or non-relevant product information. It is the responsibility of the customer to review, verify, and evaluate the information to make sure it matches their requirements before purchasing the kit. Our ELISA Kit assays are dynamic research tools and sometimes they may be updated and improved. If the format of this assay is important to you then please request the current manual or contact our technical support team with a presales inquiry before placing an order. We will confirm the current details of the assay. We cannot guarantee the sample manual posted online is the most current manual, it is intended to serve as an example only. Please refer to the instructions For Use provided with the assay kit for precise details.

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