CD49b Antibody – Mouse Monoclonal

PRODUCT OVERVIEW

Product Name	CD49b, Monoclonal Antibody
Full Product Name	MOUSE ANTI HUMAN CD49b
Product Gene Name	anti-CD49b antibody
Clonality	Monoclonal
Isotype	IgG1
Clone Number	31H4
Host	Mouse
Form/Format	Purified Purified IgG - liquid
Concentration	IgG concentration 1.0 mg/ml (lot specific)
Specificity	31H4 has been identified as being capable of immunoprecipitating the integrin a2 subunit from human cell-lines surface labelled with 125I. It has been confirmed specific to a2 by relative expression of antigen on various cell lines by flow cytometry, and recognition of affinity purified a2b1 in dot blots.
Preparation and Storage	Store at 4 degree C for one month or at -20 degree C for longer. This product should be stored undiluted. Storage in frost-free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use. Shelf Life: 18 months from date of despatch.
Molecular Weight	129,295 Da
OMIM	192974
3D Structure	ModBase 3D Structure for P17301
Perservative Stabilisers	0.09% Sodium Azide Preparation||Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant
Immunogen	Purified human b1 integrin preparation from HT1080 fibrosarcoma cell extract. Fusion Partners||Spleen cells from immunised BALB/c mice were fused with cells of the X63/Ag8.653 mouse myeloma cell line. Buffer Solution||Phosphate buffered saline
Target Species	Human
Applications Tested/Suitable for anti-CD49b antibody	ELISA (EIA), Flow cytometry (FC/FACS), Immunoprecipitation (IP)
Application Notes for anti-CD49b antibody	**ELISA:** Maximum Dilution: 10ug/ml; **Flow Cytometry:** Minimum Dilution: 1/25; Maximum Dilution: 1/50; **Immunoprecipitation:** Minimum Dilution: 25ug/ml; Maximum Dilution: 50ug/ml
Related Product Information for anti-CD49b antibody	It has been identified as being capable of immunoprecipitating the integrin a2 subunit from human cell-lines surface labelled with 125I. It has been confirmed specific to a2 by relative expression of antigen on various cell lines by flow cytometry, and recognition of affinity purified a2b1 in dot blots.
Other Notes	Small volumes of anti-CD49b 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 CD49b purchase	MBS212452 is an antibody targeting CD49b. Also known as MOUSE ANTI HUMAN CD49b. Host: Mouse.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CD49b. It may not necessarily be applicable to this product.

NCBI GI #	116295258
NCBI GeneID	3673
NCBI Accession #	NP_002194.2
UniProt Primary Accession #	P17301
UniProt Secondary Accession #	Q14595
UniProt Related Accession #	P17301
GenBank Nucleotide #	NM_002203.3
NCBI Official Full Name	integrin alpha-2
NCBI Official Synonym Full Names	integrin, alpha 2 (CD49B, alpha 2 subunit of VLA-2 receptor)
NCBI Official Symbol	ITGA2
NCBI Official Synonym Symbols	BR; GPIa; CD49B; HPA-5; VLA-2; VLAA2
UniProt Protein Name	Integrin alpha-2
UniProt Synonym Protein Names	CD49 antigen-like family member B; Collagen receptor; Platelet membrane glycoprotein Ia; GPIa; VLA-2 subunit alpha; CD_antigen: CD49b
Protein Family	Integrin
UniProt Gene Name	ITGA2
UniProt Synonym Gene Names	CD49B; GPIa
UniProt Entry Name	ITA2_HUMAN
NCBI Protein Information	integrin alpha-2; CD49 antigen-like family member B; VLA2 receptor, alpha-2 subunit; collagen receptor; human platelet alloantigen system 5; platelet antigen Br; platelet glycoprotein GPIa; platelet membrane glycoprotein Ia; very late activation protein 2 receptor, alpha-2 subunit
NCBI Summary for CD49b	This gene encodes the alpha subunit of a transmembrane receptor for collagens and related proteins. The encoded protein forms a heterodimer with a beta subunit and mediates the adhesion of platelets and other cell types to the extracellular matrix. Loss of the encoded protein is associated with bleeding disorder platelet-type 9. Antibodies against this protein are found in several immune disorders, including neonatal alloimmune thrombocytopenia. This gene is located adjacent to a related alpha subunit gene. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Aug 2012]

UniProt Comments for CD49b	ITGA2: Integrin alpha-2/beta-1 is a receptor for laminin, collagen, collagen C-propeptides, fibronectin and E-cadherin. It recognizes the proline-hydroxylated sequence G-F-P-G-E-R in collagen. It is responsible for adhesion of platelets and other cells to collagens, modulation of collagen and collagenase gene expression, force generation and organization of newly synthesized extracellular matrix. Belongs to the integrin alpha chain family. Protein type: Membrane protein, integral; Cell adhesion; Receptor, misc.; Motility/polarity/chemotaxis Chromosomal Location of Human Ortholog: 5q11.2 Cellular Component: cell surface; focal adhesion; perinuclear region of cytoplasm; plasma membrane; nerve terminal; nucleus; integrin complex; external side of plasma membrane Molecular Function: collagen binding; viral receptor activity; integrin binding; protein binding; protein heterodimerization activity; metal ion binding; laminin binding Biological Process: axon guidance; extracellular matrix organization and biogenesis; response to muscle activity; entry of virus into host cell; positive regulation of cell adhesion; positive regulation of positive chemotaxis; positive regulation of translation; positive regulation of leukocyte migration; cell-matrix adhesion; positive regulation of smooth muscle cell proliferation; positive regulation of collagen binding; positive regulation of collagen biosynthetic process; positive regulation of cell projection organization and biogenesis; mesodermal cell differentiation; positive regulation of smooth muscle cell migration; response to L-ascorbic acid; response to organic cyclic substance; establishment of protein localization; mammary gland development; positive regulation of smooth muscle contraction; cell adhesion; positive regulation of DNA binding; response to drug; integrin-mediated signaling pathway; substrate-bound cell migration; skin morphogenesis; hypotonic response; cell-substrate adhesion; cellular response to hormone stimulus; cell proliferation; detection of mechanical stimulus involved in sensory perception of pain; organ morphogenesis; response to hypoxia; cell adhesion mediated by integrin; positive regulation of phagocytosis, engulfment; blood coagulation; response to amine stimulus; positive regulation of transmission of nerve impulse; positive regulation of inflammatory response Disease: Bleeding Disorder, Platelet-type, 9
Research Articles on CD49b	**1.** These results reveal betaig-h3 enhances the metastasis potentials of human osteosarcoma cells via integrin alpha2beta1-mediated PI3K/AKT signal pathways.
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