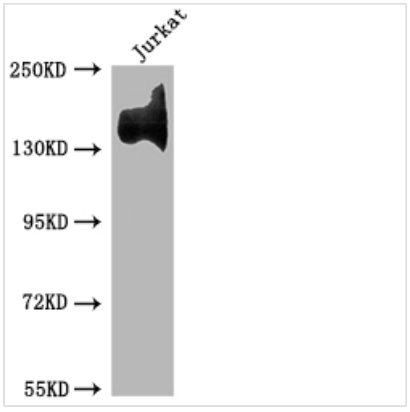
ITGA4 Recombinant Monoclonal Antibody

Product Code	CSB-RA225859A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P13612
Immunogen	A synthesized peptide derived from human Integrin alpha 4
Species Reactivity	Human
Tested Applications	ELISA, WB; Recommended dilution: WB:1:500-1:5000
Relevance	Integrins alpha-4/beta-1 (VLA-4) and alpha-4/beta-7 are receptors for fibronectin. They recognize one or more domains within the alternatively spliced CS-1 and CS-5 regions of fibronectin. They are also receptors for VCAM1. Integrin alpha-4/beta-1 recognizes the sequence Q-I-D-S in VCAM1. Integrin alpha-4/beta-7 is also a receptor for MADCAM1. It recognizes the sequence L-D-T in MADCAM1. On activated endothelial cells integrin VLA-4 triggers homotypic aggregation for most VLA-4-positive leukocyte cell lines. It may also participate in cytolytic T-cell interactions with target cells. ITGA4:ITGB1 binds to fractalkine (CX3CL1) and may act as its coreceptor in CX3CR1-dependent fractalkine signaling (PubMed:23125415). ITGA4:ITGB1 binds to PLA2G2A via a site (site 2) which is distinct from the classical ligand-binding site (site 1) and this induces integrin conformational changes and enhanced ligand binding to site 1 (PubMed:18635536, PubMed:25398877).
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Cardiovascular; Immunology; Signal transduction; Stem cells
Gene Names	ITGA4
Clone No.	1H4
Image	



Western Blot
Positive WB detected in: Jurkat whole cell lysate
All lanes: ITGA4 antibody at 1:1500
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 115, 26 kDa
Observed band size: 140 kDa

Description

The ITGA4 recombinant monoclonal antibody is produced using recombinant DNA technology and has been validated for use in the detection of human ITGA4 protein in ELISA and WB applications. First, myeloma cells and B cells from an animal immunized with a synthesized peptide derived from human ITGA4 are fused to produce the hybridomas. The cDNA of the ITGA4 antibody-producing hybridomas is then sequenced, and the gene coding for the ITGA4 monoclonal antibody is synthesized. The synthesized gene is then cloned into a vector and transfected into cells for cultivation. Finally, the ITGA4 recombinant monoclonal antibody is purified from the cell culture supernatant using affinity chromatography.

The ITGA4 protein is expressed on the surface of various cell types, including leukocytes, and is involved in regulating cell-to-cell interactions, cell adhesion, cell signaling, and migration. In particular, ITGA4 functions as a receptor for VCAM-1, the binding of which helps to mediate the adhesion and migration of leukocytes across the endothelium and into tissues during immune responses. ITGA4 has also been implicated in regulating cell proliferation, survival, and differentiation. Dysregulation of ITGA4 has been associated with various diseases, including inflammatory and autoimmune disorders, cancer, and cardiovascular disease.