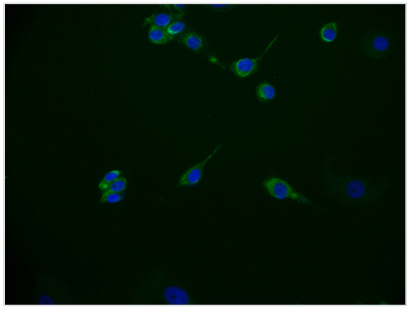
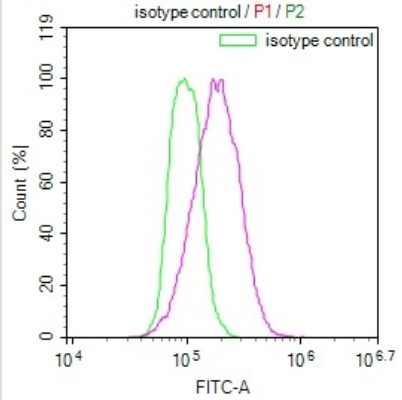
ITGA6 Recombinant Monoclonal Antibody

Product Code	CSB-RA172768A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P23229
Immunogen	A synthesized peptide derived from human ITGA6
Species Reactivity	Human
Tested Applications	ELISA, IF, FC; Recommended dilution: IF:1:50-1:200, FC:1:50-1:200
Relevance	Integrin alpha-6/beta-1 (ITGA6:ITGB1) is a receptor for laminin on platelets (By similarity). Integrin alpha-6/beta-1 (ITGA6:ITGB1) is present in oocytes and is involved in sperm-egg fusion (By similarity). Integrin alpha-6/beta-4 (ITGA6:ITGB4) is a receptor for laminin in epithelial cells and it plays a critical structural role in the hemidesmosome (By similarity). ITGA6:ITGB4 binds to NRG1 (via EGF domain) and this binding is essential for NRG1-ERBB signaling (PubMed:20682778). ITGA6:ITGB4 binds to IGF1 and this binding is essential for IGF1 signaling (PubMed:22351760). ITGA6:ITGB4 binds to IGF2 and this binding is essential for IGF2 signaling (PubMed:28873464). {ECO:0000250|UniProtKB:Q61739, ECO:0000269|PubMed:20682778, ECO:0000269|PubMed:22351760, ECO:0000269|PubMed:28873464}.
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	Developmental biology; Signal transduction; Stem cells
Gene Names	ITGA6
Clone No.	4G10
Image	 Immunofluorescence staining of MCF-7 cell with CSB-RA172768A0HU at 1:50, counter-stained with DAPI. The cells were fixed in 4% formaldehyde and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4°C. The secondary antibody was Alexa Fluor 536-congugated AffiniPure Goat Anti-Rabbit IgG(H+L).



Overlay Peak curve showing Hela cells surface stained with CSB-RA172768A0HU (red line) at 1:100. The cells were incubated in 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (1ug/1*10^6cells) for 45min at 4?. The secondary antibody used was FITC-conjugated Goat Anti-rabbit IgG(H+L) at 1:200 dilution for 35min at 4?.Control antibody (green line) was rabbit IgG (1ug/1*10^6cells) used under the same conditions. Acquisition of >10,000 events was performed.

Description

The production of the ITGA6 recombinant monoclonal antibody is a sophisticated procedure requiring several steps. Initially, the ITGA6 monoclonal antibody is collected and its gene sequence is analyzed. A vector that carries the ITGA6 monoclonal antibody gene is then constructed and transfected into a host cell line for culture. During ITGA6 monoclonal antibody synthesis, a synthesized peptide based on human ITGA6 is utilized as the immunogen. The ITGA6 recombinant monoclonal antibody is purified using affinity chromatography, and its specificity is then tested using ELISA, IF, and FC applications.

ITGA6 is a transmembrane protein that acts as a receptor for laminin-1, laminin-2, laminin-10, laminin-11, and several other extracellular matrix (ECM) proteins. In cells, ITGA6 is involved in cell adhesion, migration, differentiation, proliferation, and survival. The binding of ITGA6 to its ligands activates various signaling pathways, including the PI3K-Akt and MAPK pathways, which regulate several cellular processes. ITGA6 is also known to interact with other proteins, such as CD151 and integrin beta-4, to form heterodimers that modulate integrin signaling and function.