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ITGA5 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1336a

Product Information

Application	WB, IHC, FC, E
Primary Accession	P08648
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	10F6
Isotype	IgG2a
Calculated MW	114536
Description	The product of this gene belongs to the integrin alpha chain family. Integrins are heterodimeric integral membrane proteins composed of an alpha chain and a beta chain. This gene encodes the integrin alpha 5 chain. Alpha chain 5 undergoes post-translational cleavage in the extracellular domain to yield disulfide-linked light and heavy chains that join with beta 1 to form a fibronectin receptor. In addition to adhesion, integrins are known to participate in cell-surface mediated signalling. Integrin alpha 5 is a heterodimer that associates noncovalently with CD29/integrin beta 1 subunit to form the alpha-5-beta-1 very late antigen (VLA-5) complex. VLA-5 is a fibronectin receptor that is expressed on thymocytes, T-cells, monocytes and platelets. It is also found on very early B-cells and activated B-cells. VLA-5-mediated binding to fibronectin sends a costimulatory signal to T-cells and enhances Fc-gamma-R- and complement receptor-mediated phago-cytosis. It is also involved in monocyte migration into extracellular tissues.
Immunogen	Purified recombinant fragment of human ITGA5 expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	3678
Other Names	Integrin alpha-5, CD49 antigen-like family member E, Fibronectin receptor subunit alpha, Integrin alpha-F, VLA-5, CD49e, Integrin alpha-5 heavy chain, Integrin alpha-5 light chain, ITGA5, FNRA
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 E~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	ITGA5 Antibody is for research use only and not for use in diagnostic or

therapeutic procedures.

Protein Information

Name	ITGA5 (HGNC:6141)
Synonyms	FNRA
Function	Integrin alpha-5/beta-1 (ITGA5:ITGB1) is a receptor for fibronectin and fibrinogen. It recognizes the sequence R-G-D in its ligands. ITGA5: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). ITGA5:ITGB1 acts as a receptor for fibrillin-1 (FBN1) and mediates R-G-D-dependent cell adhesion to FBN1 (PubMed:12807887, PubMed:17158881). ITGA5:ITGB1 acts as a receptor for fibronectin (FN1) and mediates R-G-D-dependent cell adhesion to FN1 (PubMed:33962943). ITGA5:ITGB1 is a receptor for IL1B and binding is essential for IL1B signaling (PubMed:29030430). ITGA5:ITGB3 is a receptor for soluble CD40LG and is required for CD40/CD40LG signaling (PubMed:31331973). ITGA5:ITGB1 acts as a receptor for SNED1 and mediates R-G-D-dependent cell adhesion to SNED1 (PubMed:39713860).
Cellular Location	Cell membrane; Single-pass type I membrane protein. Cell junction, focal adhesion
Tissue Location	Expressed in placenta (at protein level).

References

1. Proc Natl Acad Sci USA. 1993. 90(22):10553-7 2. J Cell Biol. 1998. 143(7):2081-92 3. Mol Biol Cell. 2000. 11(9):3109-21 4. J Cell Biol. 2001. 152(1):65-73 5. J Biol Chem. 2002. 277(22):19800-5

Images

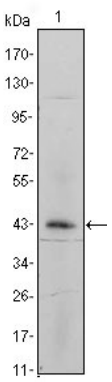
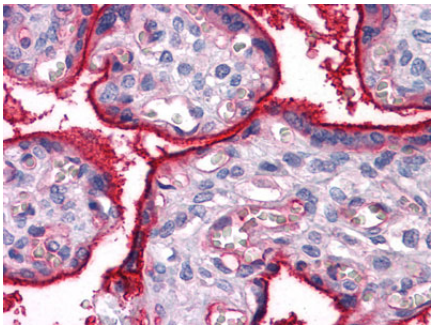


Figure 1: Western blot analysis using ITGA5 mouse mAb against ITGA5-hIgGFc transfected HEK293 cell lysate.

Figure 2: Immunohistochemical analysis of paraffin-embedded human Placenta tissues using ITGA5 mouse mAb



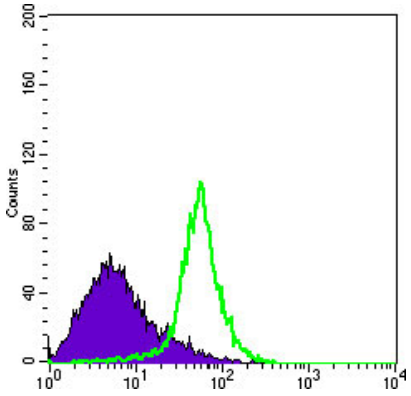


Figure 3: Flow cytometric analysis of Hela cells using ITGA5 mouse mAb (green) and negative control (purple).

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