Active Recombinant Human Integrin Alpha 5 Beta 3 Heterodimer Protein

Cat. No. ITGAVB3-101H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human Integrin alpha 5 beta 3 heterodimer protein (Human ITGA5 & ITGB3) Phe 42 - Tyr 995 (Integrin alpha 5, NP_002196) and Gly 27 - Asp 718 (Integrin beta 3, AAI27667) was co-expressed in human 293 cells (HEK293).
Species	Human
Source	HEK293
ProteinLength	42-995;27-718 a.a.
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.
Molecular Mass	Subunit Integrin alpha 5 (ITGA5) is fused with Strep II-tag at the C-terminus and subunit Integrin beta 3 (ITGB3) is fused with his-tag at the C-terminus. The heterodimer Human ITGA5 & ITGB3, co-expressed by ITGA5 plasmid and ITGB3 plasmid, has a calculated MW of 105.4 kDa (alpha 5 subunit) and 77.3 kDa (beta 3 subunit). The predicted N-terminus is Phe42 (Integrin alpha 5) and Gly 27 (Integrin beta 3) . DTT-reduced Protein migrates as 105-150 kDa due to glycosylation.

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Formulation	Lyophilized from 0.22 μm filtered solution in 20 mM Tris, pH 7.5 with 150 mM NaCl and 0.5 mM CaCl2. Normally Mannitol or Trehalose are added as protectants before lyophilization.
Purity	>90% as determined by SDS-PAGE.
Bioactivity	Measured by its ability in functional ELISA. Immobilized recombinant human Vitronectin protein at 1 ug/ml can bind Recombinant human Integrin alpha 5 beta 3 heterodimer protein with apparent KD <8 nM.
Endotoxin	Less than 1.0 EU per μg of the Human ITGA5 & ITGB3 by the LAL method.
Storage	-20°C to -70°C for 3 months under sterile conditions after reconstitution. Avoid repeated freezethaw cycles.
OfficialSymbol	ITGA5

GENE INFORMATION

Gene Name	ITGA5 integrin, alpha 5 (fibronectin receptor, alpha polypeptide) [Homo sapiens]
Synonyms	ITGA5; integrin, alpha 5 (fibronectin receptor, alpha polypeptide); FNRA; CD49e; VLA5A; integrin alpha-5; VLA-5; integrin alpha-F; CD49 antigen-like family member E; fibronectin receptor subunit alpha; fibronectin receptor, alpha subunit; very late activation protein 5, alpha subunit; Integrin alpha-5; Fibronectin receptor subunit alpha; Integrin alpha-F
Gene ID	3678
mRNA Refseq	NM_002205

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Protein Refseq	NP_002196
MIM	135620
UniProt ID	P08648
Chromosome Location	12q11-q13
Pathway	Angiopoietin receptor Tie2-mediated signaling; Arrhythmogenic right ventricular cardiomyopathy (ARVC); Axon guidance; Bacterial invasion of epithelial cells; Cell surface interactions at the vascular wall; Dilated cardiomyopathy; ECM-receptor interaction; Focal Adhesion; Focal adhesion; Hematopoietic cell lineage; Hemostasis; Integrin cell surface interactions; Integrin-mediated cell adhesion; L1CAM interactions; Pertussis
Function	protein binding; metal ion binding; platelet-derived growth factor receptor binding; vascular endothelial growth factor receptor 2 binding

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