

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 CaCl ₂ . 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 µg/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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