

## Integrin alpha V beta 6 Protein, Human, Recombinant (Flag & His)

### General Information

Synonyms:	Integrin alpha V $\beta$ 6;ITGAV & ITGB6;integrin, alpha 5 (fibronectin receptor, alpha polypeptide); Integrin $\alpha$ V $\beta$ 6;integrin, $\alpha$ 5 (fibronectin receptor, $\alpha$ polypeptide)
Protein Construction:	A DNA sequence encoding the extracellular domain (Met 1-Val992) of human ITGAV (P06756-1) was fused with a flag tag at the C-terminus, constructed the plasmid 1; A DNA sequence encoding the extracellular domain (Met1-Asn707) of human ITGB6 (P18564-1) was fused with a polyhistidine tag at the C-terminus, constructed the plasmid 2. The two plasmids were co-expressed and the human ITGAV&ITGB6 heterodimer was purified. Predicted N terminal: Phe 31 & Gly 22
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P06756-1&P18564-1
Molecular Weight:	190.4 kDa (predicted)

### QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/ $\mu$ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 $\mu$ m filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

Reconstitution:	Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.
Stability & Storage:	It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots. <small>Actual storage temperature shall be subject to the COA.</small>
Shipping:	In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

Integrin alpha-5, also known as ITGA5, is a single-pass type I membrane protein which belongs to the integrin alpha chain family. ITGA5 contains 7 FG-GAP repeats. 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. ITGA5&ITGB6 is a receptor for fibronectin and cytotactin. It recognizes the sequence R-G-D in its ligands. Internalisation of ITGA5&ITGB6 via clathrin-mediated endocytosis promotes carcinoma cell invasion.

### Reference

- Suzuki S., et al., (1987), Amino acid sequence of the vitronectin receptor alpha subunit and comparative expression of adhesion receptor mRNAs. *J. Biol. Chem.* 262:14080-14085.
- Sims M.A., et al., (2000), Cloning and characterisation of ITGA5, the genomic sequence for human cell adhesion protein (vitronectin) receptor alpha subunit, CD51. *Cytogenet. Cell Genet.* 89:268-271.
- Ota T., et al., (2004), Complete sequencing and characterization of 21,243 full-length human cDNAs. *Nat. Genet.* 36: 40-45.

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