

## ITGB1 Protein, Human, Recombinant (His)

### General Information

Synonyms:	VLAB;integrin, beta 1 (fibronectin receptor, beta polypeptide, antigen CD29 includes MDF2, MSK12);integrin, $\beta$ 1 (fibronectin receptor, $\beta$ polypeptide, antigen CD29 includes MDF2, MSK12);GPIIA;MSK12;CD29;Integrin $\beta$ 1;FNRB;MDF2;VLA- $\beta$ ;VLA-BETA
Protein Construction:	Gln21-Asp728
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P05556
Molecular Weight:	79.4 kDa (predicted); 100-130 kDa (reducing condition, due to glycosylation)

### QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it.
Purity:	> 90% 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:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100  $\mu$ g/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

#### 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.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

ITGB1 (Integrin Subunit Beta 1) is a Protein Coding gene. This gene encodes a beta subunit, which is a type 1 transmembrane protein of the integrin beta chain family. ITGB1 is a heterodimeric cell-surface receptor involved in cell functions such as proliferation, migration, invasion, and survival. ITGB1 has been recognized to play a major

role in tumor growth, invasion, and metastasis. Using luciferase assays, the researcher identified ITGB1 as a direct target of miR-134. ITGB1 is a direct target of miR-493-5p suggesting that ITGB1 and miR-493-5p may have potential prognostic value and may be useful as tumor biomarkers for the diagnosis of NSCLC patients. Diseases associated with ITGB1 include Gallbladder Cancer and Breast Cancer.

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Tel:781-999-4286 E\_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481