

**Synonym**

Integrin alpha 10 beta 1,ITGA10&amp;ITGB1

**Source**

Human ITGA10&ITGB1 Heterodimer Protein, His Tag&Tag Free (IT1-H52Wa) is expressed from human 293 cells (HEK293). It contains AA Phe 23 - Ser 1122 (ITGA10) & Gln 21 - Asp 728 (ITGB1) (Accession # O75578-1 (ITGA10) & P05556-1 (ITGB1)).

Predicted N-terminus: Phe 23 (ITGA10) & Gln 21 (ITGB1)

**Molecular Characterization**

ITGA10 (Phe 23 - Ser 1122) O75578-1	Acidic Tail	Poly-his
ITGB1 (Gln 21 - Asp 728) P05556-1	Basic Tail	

Human ITGA10&ITGB1 Heterodimer Protein, His Tag&Tag Free, produced by co-expression of ITGA10 and ITGB1, has a calculated MW of 126.6 kDa (ITGA10) and 83.7 kDa (ITGB1). Subunit ITGA10 is fused with an acidic tail at the C-terminus and followed by a polyhistidine tag and subunit ITGB1 contains no tag but a basic tail at the C-terminus. The reducing (R) protein migrates as 140-160 kDa (ITGA10) and 100-130 kDa (ITGB1) respectively due to glycosylation.

**Endotoxin**

Less than 1.0 EU per µg by the LAL method.

**Purity**

>95% as determined by SDS-PAGE.

**Formulation**

Lyophilized from 0.22 µm filtered solution in 50 mM Tris, 150 mM NaCl, pH7.5. Normally trehalose is added as protectant before lyophilization.

Contact us for customized product form or formulation.

**Reconstitution**

Please see Certificate of Analysis for specific instructions.

*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.*

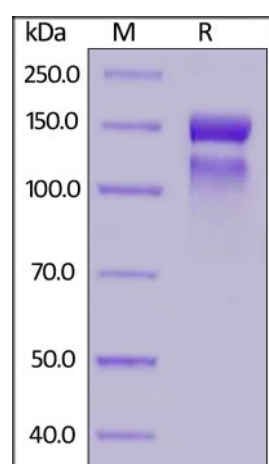
**Storage**

For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

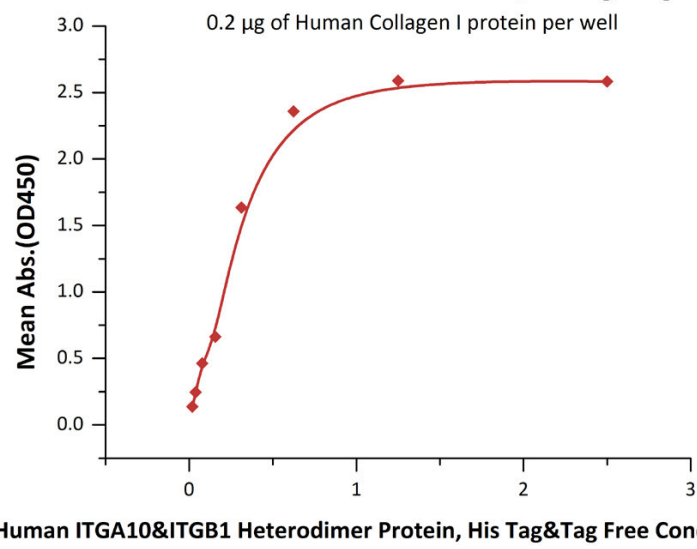
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

**SDS-PAGE**

Human ITGA10&ITGB1 Heterodimer Protein, His Tag&Tag Free on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

**Bioactivity-ELISA**

## Human ITGA10&amp;ITGB1 Heterodimer Protein, His Tag&amp;Tag Free ELISA



Immobilized Human Collagen I protein at 2 µg/mL (100 µL/well) can bind Human ITGA10&ITGB1 Heterodimer Protein, His Tag&Tag Free (Cat. No. [IT1-H52Wa](#)) with a linear range of 0.02-0.313 µg/mL (QC tested).

### Background

Human integrin alpha(10)I domain as a recombinant protein to reveal its ligand binding specificity. In general, alpha(10)I did recognize collagen types I-VI and laminin-1 in a Mg(2+)-dependent manner, whereas its binding to tenascin was only slightly better than to albumin. Alpha 10 beta 1 is a known collagen-binding I domain integrin, in addition to  $\alpha 1\beta 1$ ,  $\alpha 2\beta 1$  and  $\alpha 11\beta 1$ . GROGER found in the N-terminal domain of collagens I and III, is only weakly recognised by  $\alpha 10\beta 1$ , an important collagen receptor on chondrocytes, contrasting with the other collagen-binding integrins.

### References

- (1) [Gullberg DE, et al. Prog Histochem Cytochem. 2002. 37\(1\):3-54.](#)
- (2) [Tulla M, et al. J Biol Chem. 2001. 276\(51\):48206-12.](#)
- (3) [Hamaia SW, et al. Matrix Biol. 2017. 59:80-94.](#)

Please contact us via [TechSupport@acrobiosystems.com](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.