Human LRRC32&TGF-beta 1 Heterotrimer protein, His Tag&Tag Free (MALS verified)

Catalog # GA1-H52W9

Synonym

LRRC32 & TGF-beta 1,LRRC32&TGFB1

Source

Human LRRC32&TGFB1 Heterotrimer protein, His Tag&Tag Free(GA1-H52W9) is expressed from human 293 cells (HEK293). It contains AA His 20 - Asn 627 (LRRC32) & Leu 30 - Ser 390 (TGF-beta 1) (Accession # Q14392-1 (LRRC32) & P01137-1 (TGF-beta1)).
Predicted N-terminus: Leu 30

Molecular Characterization

Human LRRC32&TGFB1 Heterotrimer protein, His Tag&Tag Free (the molar ratio of LRRC32 & TGF-beta 1 equals 1:2) is produced by co-expression of LRRC32 and TGF-beta 1, which has a calculated MW of 68.0 kDa (LRRC32), 28.5 (LAP) and 12.8 kDa (mature TGF-beta 1) respectively. LRRC32 is fused with a polyhistidine tag at the C-terminus and TGF-beta 1 contains no tag. The reducing (R) Heterotrimer protein migrates as 70 kDa (LRRC32), 38-45 kDa (LAP) and 14 kDa (mature TGF-beta 1) when calibrated against Star Ribbon Pre-stained Protein Marker due to glycosylation respectively.

Endotoxin

Less than 1.0 EU per μg by the LAL method.

Purity

>90% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS, pH7.4 with trehalose as protectant.

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

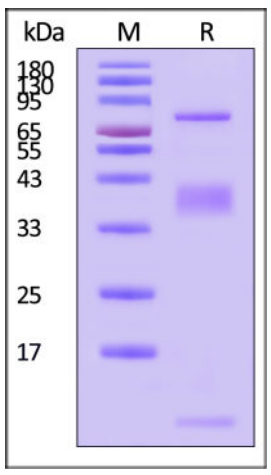
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

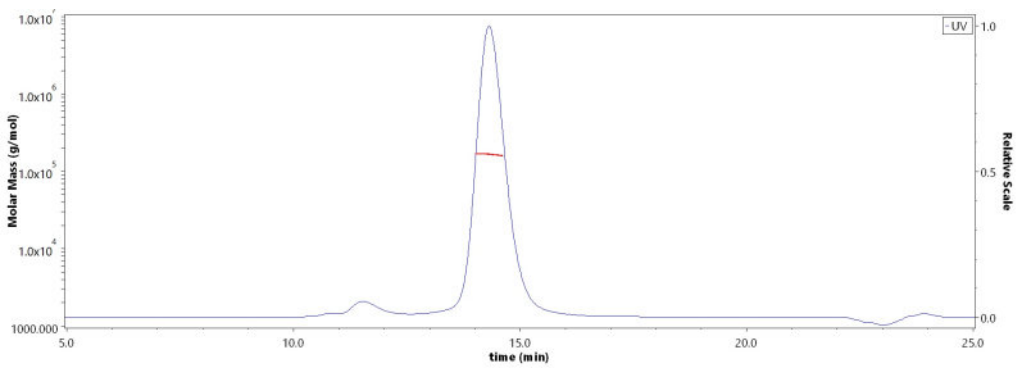
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



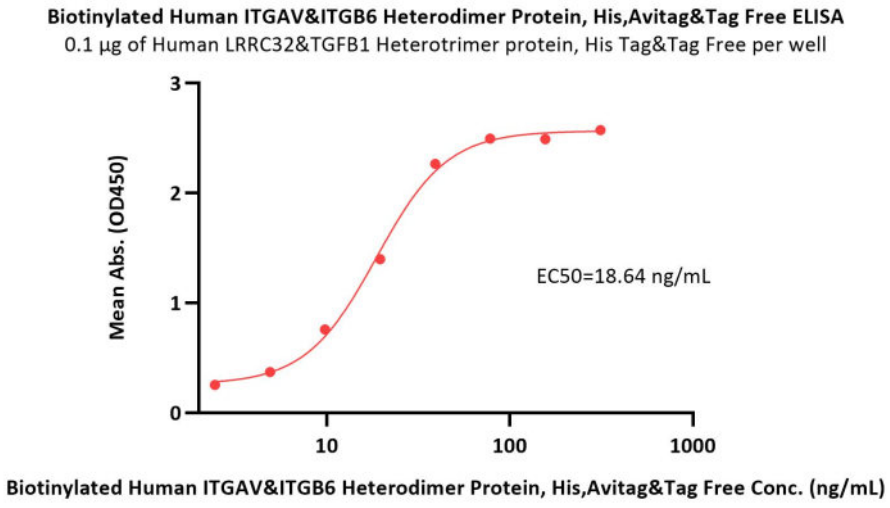
Human LRRC32&TGFB1 Heterotrimer protein, His Tag&Tag Free on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With Star Ribbon Pre-stained Protein Marker).

SEC-MALS

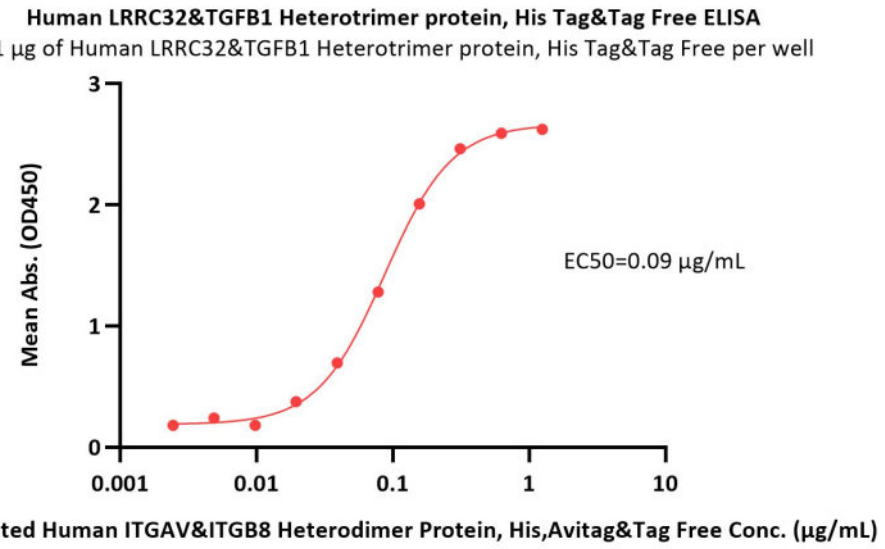


The purity of Human LRRC32&TGFB1 Heterotrimer protein, His Tag&Tag Free (Cat. No. GA1-H52W9) is more than 85% and the molecular weight of this protein is around 150-184 kDa verified by SEC-MALS.
Report

Bioactivity-ELISA



Immobilized Human LRRC32&TGFB1 Heterotrimer protein, His Tag&Tag Free (Cat. No. GA1-H52W9) at 1 μg/mL (100 μL/well) can bind Biotinylated Human ITGAV&ITGB6 Heterodimer Protein, His,Avitag&Tag Free (Cat. No. IT6-H82E4) with a linear range of 2-39 ng/mL (Routinely tested).



Immobilized Human LRRC32&TGFB1 Heterotrimer protein, His Tag&Tag Free (Cat. No. GA1-H52W9) at 1 μg/mL (100 μL/well) can bind Biotinylated Human ITGAV&ITGB8 Heterodimer Protein, His,Avitag&Tag Free (Cat. No. IT8-H82W5) with a linear range of 0.002-0.313 μg/mL (Routinely tested).

Background

GARP (LRRC32) is a transmembrane protein that binds latent-TGF-β1 and tethers it on the Treg surface. and has been proved to promote the activation and secretion of transforming growth factor β (TGF-β). The expression of GARP is highly on the surface activated Tregs and increases the suppressive function of Tregs. Additionally, GARP can bind to latent transforming growth factor β (TGF-β), thus promoting secretion and activation of TGF-β. TGF-β plays a critical rule for homeostasis and function of Tregs. Notably, it has been also observed that fibroblasts and endothelial cell lines that express GARP/latent TGF-β1 complexes do not activate TGF-β1. However, it cannot be excluded that specific stimuli are required to trigger TGF-β1 activation from complexes on the surface of these cell types.

Clinical and Translational Updates