## 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) 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  $0.22~\mu m$  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**

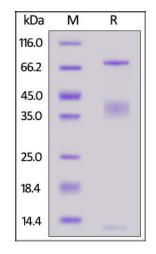
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

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.

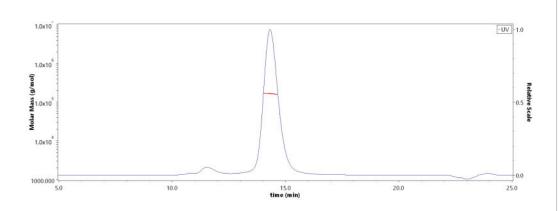
### **SDS-PAGE**



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%.

## **Bioactivity-ELISA**

### 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.

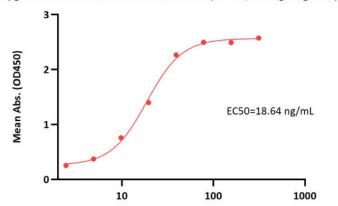
Report

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Catalog # GA1-H52W9



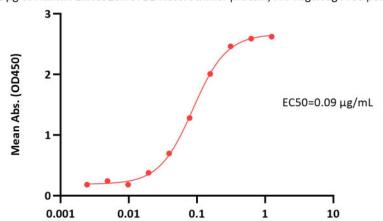
Biotinylated Human ITGAV&ITGB6 Heterodimer Protein, His,Avitag&Tag Free ELISA 0.1 µg of Human LRRC32&TGFB1 Heterotrimer protein, His Tag&Tag Free per well



Biotinylated Human ITGAV&ITGB6 Heterodimer Protein, His, Avitag&Tag Free Conc. (ng/mL)

Immobilized Human LRRC32&TGFB1 Heterotrimer protein, His Tag&Tag Free (Cat. No. GA1-H52W9) at 1  $\mu$ g/mL (100  $\mu$ L/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).

Human LRRC32&TGFB1 Heterotrimer protein, His Tag&Tag Free ELISA 0.1 µg of Human LRRC32&TGFB1 Heterotrimer protein, His Tag&Tag Free per well



Biotinylated Human ITGAV&ITGB8 Heterodimer Protein, His, Avitag&Tag Free Conc. (μg/mL)

Immobilized Human LRRC32&TGFB1 Heterotrimer protein, His Tag&Tag Free (Cat. No. GA1-H52W9) at 1  $\mu$ g/mL (100  $\mu$ L/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  $\mu$ g/mL (Routinely tested).

## Background

GARP (LRRC32) is a transmembrane protein that binds latent-TGF- $\beta$ 1 and tethers it on the Treg surface. and has been proved to promote the activation and secretion of transforming growth factor  $\beta$  (TGF- $\beta$ ). 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  $\beta$  (TGF- $\beta$ ), thus promoting secretion and activation of TGF- $\beta$ . TGF- $\beta$  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- $\beta$ 1 complexes do not activate TGF- $\beta$ 1. However, it cannot be excluded that specific stimuli are required to trigger TGF- $\beta$ 1 activation from complexes on the surface of these cell types.

# **Clinical and Translational Updates**

