

#### Synonym

4-1BB Ligand, TNFSF9, CD137L

#### Source

Rat 4-1BB Ligand His,Flag Tag(41L-R52D3) is expressed from human 293 cells (HEK293). It contains AA Pro 106 - Gly 308 (Accession # Q80WE6-1). Predicted N-terminus: His

### **Molecular Characterization**



This protein carries a polyhistidine tag at the N-terminus, followed by a flag tag

The protein has a calculated MW of 72.3 kDa. The protein migrates as 95-115 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

#### **Endotoxin**

Less than 1.0 EU per  $\mu g$  by the LAL method.

## **Purity**

>95% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

#### **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**

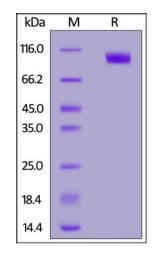
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

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.

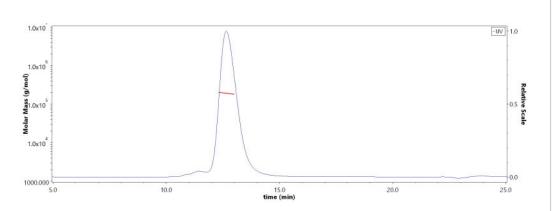
# SDS-PAGE



Rat 4-1BB Ligand His,Flag Tag 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**

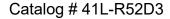
## **SEC-MALS**



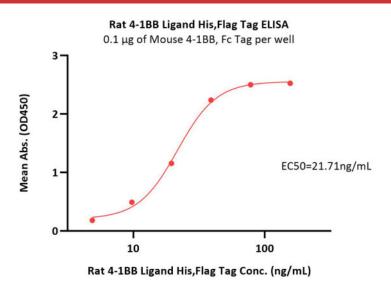
The purity of Rat 4-1BB Ligand His,Flag Tag (Cat. No. 41L-R52D3) is more than 90% and the molecular weight of this protein is around 169-206 kDa verified by SEC-MALS.

Report

# Rat 4-1BB Ligand / TNFSF9 Protein, His,Flag Tag (MALS verified)







Immobilized Mouse 4-1BB, Fc Tag (Cat. No. 41B-M5258) at 1  $\mu$ g/mL (100  $\mu$ L/well) can bind Rat 4-1BB Ligand His,Flag Tag (Cat. No. 41L-R52D3) with a linear range of 5-39 ng/mL (QC tested).

## Background

Tumor necrosis factor ligand superfamily member 9 (4-1BBL) is also known as 4-1BB ligand, CD137L or TNFSF9, which is a cytokine that binds to TNFRSF9. 4-1BBL is the high affinity ligand of 4-1BB. 4-1BBL induces the proliferation of activated peripheral blood T-cells. Also, 4-1BBL may have a role in activation-induced cell death (AICD). Furthermore, 4-1BBL may play a role in cognate interactions between T-cells and B-cells/macrophages. As for diseases, 4-1BBL is involved in cancers, infectious diseases and autoimmune diseases.

## **Clinical and Translational Updates**

Please contact us via <u>TechSupport@acrobiosystems.com</u> if you have any question on this product.