

Human TNFRSF9(4-1BB) Protein; His Tag

Product Information

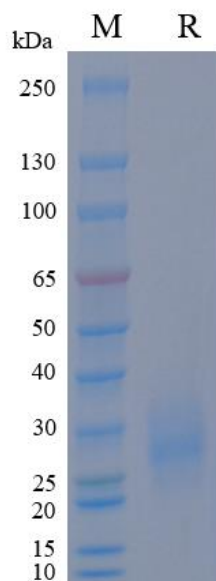
Product Name	Human TNFRSF9(4-1BB) Protein; His Tag
Storage temp	Store at $\leq -70^{\circ}\text{C}$, stable for 6 months after receipt. Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles.
Catalog# / Size	GM-88100RP-100 / 100 μg GM-88100RP-1000 / 1 mg

Protein Information

Alternative Names	TNFRSF9, 4-1BB, CD137, CDw137, ILA
Source	Human TNFRSF9(4-1BB) Protein; His Tag (GM-88100RP) is expressed from human 293 cells (HEK-293). It contains AA Leu 24 - Gln 186 (Accession # Q07011-1). This protein carries a His tag at the C-terminus.
Purity	> 95% as determined by SDS-PAGE
Endotoxin	< 1 EU/ μg , determined by LAL gel clotting assay
Predicted Mol Mass	18.6 KDa
Formulation	Supplied as a 0.2 μm filtered solution of PBS, pH7.2-7.4.
Description	4-1BB, also known as CD137, is a member of the TNF receptor superfamily. It is a transmembrane receptor expressed on activated T cells, NK cells, dendritic cells, and some other immune cells, with inducible expression upon activation. Its ligand, 4-1BBL (CD137L/TNFSF9), is typically expressed on antigen-presenting cells. Engagement of 4-1BB enhances T cell proliferation, survival, cytokine production (notably IFN- γ), and sustains anti-tumor and anti-viral responses. Dysregulation of 4-1BB signaling has implications for autoimmunity and transplant tolerance, and it is a target for immunotherapies. 4-1BB signaling is initiated by binding to 4-1BBL, leading to recruitment of adaptor proteins and activation of the NF- κB and MAPK pathways, as well as PI3K-AKT signaling in certain contexts. This promotes T cell survival (upregulation of anti-apoptotic genes), expansion, and effector function, including cytokine production. The pathway can be modulated by co-stimulatory or co-inhibitory signals and can synergize with other TNF family members or checkpoint regulators. Therapeutically, 4-1BB agonists are explored to boost anti-tumor immunity, while excessive activation may cause immunopathology.

Version:4.0

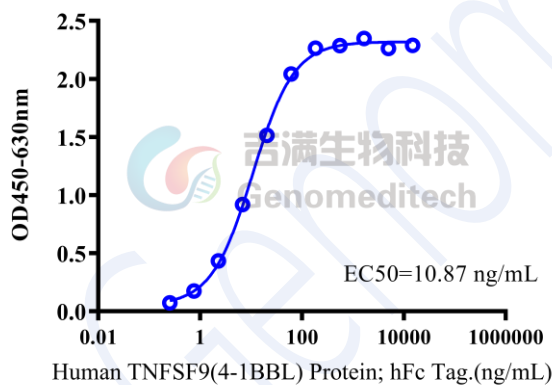
SDS-PAGE



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

Bioactivity-ELISA
0.2 μ g Human TNFRSF9(4-1BB) Protein; His Tag of per well



Human TNFRSF9(4-1BB) Protein; His Tag (Catalog # GM-88100RP) was immobilized at 2 μ g/ml (100 μ L/well). Increasing concentrations of Human TNFSF9(4-1BBL) Protein; hFc Tag (Catalog # GM-88104RP) were added.