

# Human CellExp™ 4-1BB / TNFRSF9, Human recombinant

**CATALOG #:** 9227-10 10 µg  
9227-50 50 µg

**ALTERNATE NAMES:** TNFRSF9, 4-1BB, CD137, CDw137, ILA

**SOURCE:** HEK 293 cells (Leu 24 - Gln 186)

**PURITY:** ≥ 92% by SDS-PAGE gel

**MOL. WEIGHT:** This protein is fused with a 6x His tag at C-terminus and the protein has a calculated MW of 18.1 kDa. The predicted N-terminus is Leu 24. DTT-reduced protein migrates as 28-35 kDa in SDS-PAGE due to glycosylation.

**ENDOTOXIN LEVEL:** <1 EU/µg by LAL method

**FORM:** Lyophilized

**FORMULATION:** Lyophilized from 0.22 µm filtered solution in PBS, pH7.4. Normally Mannitol or Trehalose is added as a protectant before lyophilization.

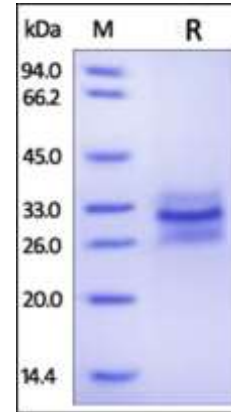
**STORAGE CONDITIONS:** Store at -20°C. After reconstitution, aliquot and store at -20°C and use within 3 months. Avoid repeated freezing and thawing cycles.

**RECONSTITUTION:** Centrifuge the vial prior to opening. Reconstitute in sterile PBS, pH 7.4 to a concentration of 50 µg/ml. Do not vortex. This solution can be stored at 2-8°C for up to 1 month. For extended storage, it is recommended to store at -20°C.

**DESCRIPTION:** 4-1BB is also known as CD137, tumor necrosis factor receptor superfamily member 9 (TNFRSF9), induced by lymphocyte activation (ILA), is a co-stimulatory molecule of the tumor necrosis factor (TNF) receptor superfamily. CD137 can be expressed by activated T cells, but to a larger extent on CD8 than on CD4 T cells. In addition, CD137 expression is found on dendritic cells, follicular dendritic cells, natural killer cells, granulocytes and cells of blood vessel walls at sites of inflammation. The best characterized activity of CD137 is its costimulatory activity for activated T cells. Crosslinking of CD137 enhances T cell proliferation, IL-2 secretion survival and cytolytic activity. Further, it can enhance immune activity to eliminate tumors in mice. CD137 can enhance activation-induced T cell apoptosis when triggered by engagement of the TCR/CD3 complex. In addition, 4-1BB/4-1BBL co-stimulatory pathway has been shown to augment secondary CTL

responses to several viruses, and meanwhile augment anti-tumor immunity. 4-1BB thus is a promising candidate for immunotherapy of human cancer. CD137 has been shown to interact with TRAF

**BIOLOGICAL ACTIVITY:** Measured by its binding ability in a functional ELISA. Immobilized Human 4-1BB, His Tag at 100 ng/mL (100 µl/well), can bind Human 4-1BB Ligand, Fc Tag with a linear of 0.1-2.5 ng/ml.



The purity of Human 4-1BB, His Tag was determined by SDS-PAGE under reducing (R) and staining overnight with Coomassie Blue.

## RELATED PRODUCTS:

- 4-1BBL Antibody (**Cat. No. 5369-100**)
- 4-1BBR Antibody (**Cat. No. 5370-100**)
- 4-1BBL, human recombinant (**Cat. No. 4369-20, -100, -1000**)
- 4-1BB Receptor, human recombinant (**Cat. No. 4370-20, -100, -1000**)
- Human CellExp™ CD166/ ALCAM, human recombinant (**Cat. No. 7437-10, -50**)
- Human CellExp™ CD172A / SIRP, human recombinant (**Cat. No. 7506-10, -50**)
- Human CellExp™ CD33 / SIGLEC-3, human recombinant (**Cat. No. 7370-10, -50**)
- Human CellExp™ CD47, human recombinant (**Cat. No. 7385-10, -50**)
- Human CellExp™ CD55/DAF, human recombinant (**Cat. No. 7432-10, -50**)
- Human CellExp™ CD58 /LFA-3, human recombinant (**Cat. No. 7427-10, -50**)
- Human CellExp™ CD62E/E-Selectin, human recombinant (**Cat. No. 7434-20, -100**)
- Human CellExp™ CD71 / TFRC / TFR, human recombinant (**Cat. No. 7279-10, -50**)
- Human CellExp™ CD74/DHLA, human recombinant (**Cat. No. 7387-10, -50**)
- Human CellExp™ CD223, human recombinant (**Cat. No. 7278-10, -50**)
- Human CellExp™ CD71, human recombinant (**Cat. No. 7279-10, -50**)
- Human CellExp™ CD273, human recombinant (**Cat. No. 7369-10, -50**)
- Human CellExp™ CD36, human recombinant (**Cat. No. 7371-10, -50**)

**FOR RESEARCH USE ONLY. Not to be used on humans**