Active Recombinant Human TNFRSF9 Protein, His-tagged

Cat. No. TNFRSF9-10980H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Human 4-1BB (24-86) Protein, His Tag is expressed from human 293 cells (HEK293). It contains AA Leu 24 - Cys 86 (Accession # Q07011-1). This protein carries a polyhistidine tag at the C-terminus. Predicted N-terminus: Leu 24
Species	Human
Source	HEK293
ProteinLength	24-86 aa
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 TRAF2.

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Form	Lyophilized from 0.22 μm filtered solution in PBS, pH7.4 with trehalose as protectant.
Bio-activity	Immobilized Human 4-1BB/TNFRSF9 (24-86), His Tag at 2 μg/mL (100 μL/well) can bind UreluMab, Human IgG4 with a linear range of 0.1-2 ng/mL.
Molecular Mass	The protein has a calculated MW of 8.7 kDa. The protein migrates as 13 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.
Endotoxin	Less than 1.0 EU/μg by the LAL method/rFC method.
Purity	>90% as determined by SDS-PAGE.
Storage	This product is stable after storage at: -20 to -70 centigrade for 12 months in lyophilized state; -70 centigrade for 3 months under sterile conditions after reconstitution. For long term storage, the product should be stored at lyophilized state at -20 centigrade or lower. Please avoid repeated freeze-thaw cycles.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 μg/μL. Centrifuge the vial at 4 centigrade before opening to recover the entire contents.

GENE INFORMATION

Gene Name	TNFRSF9 tumor necrosis factor receptor superfamily, member 9 [Homo sapiens (human)]
Official Symbol	TNFRSF9
Synonyms	TNFRSF9; tumor necrosis factor receptor superfamily, member 9; ILA; tumor necrosis factor receptor superfamily member 9; 4 1BB; CD137; CD137 antigen; T cell antigen ILA; T-cell antigen ILA; 4-1BB ligand receptor; homolog of mouse 4-1BB; receptor

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	protein 4-1BB; T-cell antigen 4-1BB homolog; induced by lymphocyte activation (ILA); interleukin-activated receptor, homolog of mouse Ly63; 4-1BB; CDw137; MGC2172; FLJ43501;
Gene ID	3604
mRNA Refseq	NM_001561
Protein Refseq	NP_001552
MIM	602250
UniProt ID	Q07011

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