Canine CD137 / 4-1BB / TNFRSF9 Protein (His Tag)

Catalog Number: **70095-D08H**

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Biological Solution Specialist

General Information

Gene Name Synonym:

4-1BB; CD137; CDw137; ILA; 4-1BB; A930040I11Rik; AA408498; AI325004; Cd137; CDw137; ILA; Ly63

Protein Construction:

A DNA sequence encoding the canine TNFRSF9 (XP_850336.1) (Met1-Ser185) was expressed with a C-terminal polyhistidine tag.

Source: Canine

Expression Host: Human Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio Activity:

Measured by its binding ability in a functional ELISA. Immobilized canine TNFRSF9-His at 10 μg/ml (100 μl/well) can bind rat Fc-TNFSF9 (Cat:80166-R01H), The EC_{50} of rat Fc-TNFSF9 (Cat:80166-R01H) is 0.26-0.62 μg/ml.

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Ile 24

Molecular Mass:

The recombinant canine TNFRSF9 comprises 173 amino acids and has a predicted molecular mass of 18.4 kDa. The apparent molecular mass of the protein is approximately 28-34 kDa in SDS-PAGE under reducing conditions due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

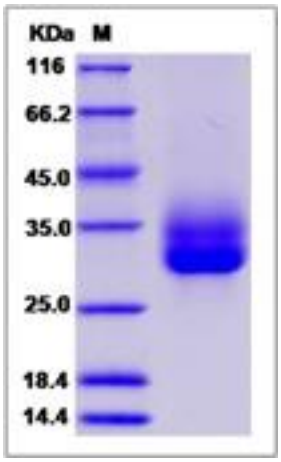
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

CD137 (also known as 4-1BB) is a surface co-stimulatory glycoprotein originally described as present on activated T lymphocytes, which belongs to the tumor necrosis factor (TNF) receptor superfamily. It is expressed mainly on activated CD4+ and CD8+ T cells, and binds to a high-affinity ligand (4-1BBL) expressed on several antigen-presenting cells such as macrophages and activated B cells. Upon ligand binding, 4-1BB is associated with the tumor necrosis factor receptor–associated factors (TRAFs), the adaptor protein which mediates downstream signaling events including the activation of NF-kappaB and cytokine production. 4-1BB signaling either by binding to 4-1BBL or by antibody ligation delivers signals for T-cell activation and growth, as well as monocyte proliferation and B-cell survival, and plays an important role in the amplification of T cell-mediated immune responses. In addition, CD137 and CD137L are expressed in different human primary tumor tissues, suggesting that they may influence the progression of tumors. Crosslinking of CD137 on activated T cells has shown promise in enhancing anti-tumor immune responses in murine models, and agonistic anti-CD137 antibodies are currently being tested in phase I clinical trials.

References

1.Sica G, *et al.* (1999) Biochemical and immunological characteristics of 4-1BB (CD137) receptor and ligand and potential applications in cancer therapy. Arch Immunol Ther Exp (Warsz). 47(5): 275-9.
2.Nam KO, *et al.* (2005) The therapeutic potential of 4-1BB (CD137) in cancer. Curr Cancer Drug Targets. 5(5): 357-63.
3.Wang Q, *et al.* (2008) Analysis of CD137 and CD137L expression in human primary tumor tissues. Croat Med J. 49(2): 192-200.