

TWEAK/TNFSF12 Protein, Human, Cynomolgus, Recombinant (mFc)

General Information

Synonyms:	tumor necrosis factor (ligand) superfamily, member 12
Protein Construction:	A DNA sequence encoding the human / cynomolgus TNFSF12 (F7HGN4) (Ser94-His249) was expressed with the Fc region of mouse IgG1 at the N-terminus. Human and Cynomolgus TNFSF12 sequences are identical. Predicted N terminal: Asp
Species:	Human,Cynomolgus
Expression Host:	HEK293 Cells
Accession:	F7HGN4
Molecular Weight:	43.8 kDa (predicted); 34 and 47 kDa (reducing conditions)

QC Testing

Biological Activity:	1. Measured in a cell proliferation assay using HUVEC human umbilical vein endothelial cells. The ED50 for this effect is typically 2-8 ng/mL. 2. Immobilized Cynomolgus mFc-TNFSF12 at 10 µg/ml (100 µl/well) can bind human Fc-TNFRSF12A , The EC50 of human Fc-TNFRSF12A is 0.07-0.15 µg/ml.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

TNFSF12 is a cytokine that belongs to the tumor necrosis factor (TNF) ligand family. It is a ligand for the FN14/TWEAKR receptor. TNFSF12 has overlapping signaling functions with TNF, but displays a much wider tissue

distribution. It can induce apoptosis via multiple pathways of cell death in a cell type-specific manner. It is also found that TNFSF12 promotes proliferation and migration of endothelial cells, and thus acts as a regulator of angiogenesis. TNFSF12 also is a weak inducer of apoptosis in some cell types and mediates NF-kappa-B activation. Cancer Immunotherapy Immune Checkpoint Immunotherapy Targeted Therapy

Reference

- Wiley SR, et al. (2004) TWEAK, a member of the TNF superfamily, is a multifunctional cytokine that binds the TweakR/Fn14 receptor. *Cytokine Growth Factor Rev.* 14(3-4):241-9.
- Campbell S, et al. (2006) The role of TWEAK/Fn14 in the pathogenesis of inflammation and systemic autoimmunity. *Front Biosci.* 9:2273-84.
- Lynch CN, et al. (1999) TWEAK induces angiogenesis and proliferation of endothelial cells. *J Biol Chem.* 274(13): 8455-9.

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