

## TNFR1/CD120a/TNFRSF1A Protein, Mouse, Recombinant (His)

## General Information

Synonyms:	TNFalpha-R1;TNFRp55;CD120a;TNF-alphaR1;FPF;p55-R;TNF-R;TNFAR;Tnfr-2;TNF $\alpha$ -R1;Tnfr1;TNF- $\alpha$ R1;tumor necrosis factor receptor superfamily member 1A;p55;TNF-R1;TNFR60;TNFRI;TNF-R55;TNF-R-I
Protein Construction:	A DNA sequence encoding the mouse TNFRSF1A (NP_035739.2) extracellular domain (Met 1- Ala 212) was expressed, with a polyhistidine tag at the C-terminus. Predicted N terminal: Leu 30
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	P25118
Molecular Weight:	21.8 kDa (predicted); 35 kDa (reducing condition, due to glycosylation)

## QC Testing

Biological Activity:	<ol style="list-style-type: none"><li>1. Measured by its binding ability in a functional ELISA.</li><li>2. Immobilized human TNFa at 10 <math>\mu</math>g/mL (100 <math>\mu</math>l/well) can bind biotinylated mouse TNFRSF1A-his. The EC50 of biotinylated mouse TNFRSF1A-his is 0.28 <math>\mu</math>g/mL.</li><li>3. Immobilized mouse TNFa at 10 <math>\mu</math>g/mL (100 <math>\mu</math>l/well) can bind biotinylated mouse TNFRSF1A-his. The EC50 of biotinylated mouse TNFRSF1A-his is 0.13 <math>\mu</math>g/mL.</li></ol>
Purity:	> 96 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/ $\mu$ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 $\mu$ m 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:	<p>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.</p> <p><i>Actual storage temperature shall be subject to the COA.</i></p>
Shipping:	In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

The cluster of differentiation (CD) system is commonly used as cell markers in Immunophenotyping. Different kinds of cells in the immune system can be identified through the surface CD molecules which associating with the immune function of the cell. There are more than 320 CD unique clusters and subclusters have been identified. Some of the CD molecules serve as receptors or ligands important to the cell through initiating a signal cascade which then alter the behavior of the cell. Some CD proteins do not take part in cell signal process but have other functions such as cell adhesion. CD120a (cluste of differentiation 120a), also known as TNFR1 / TNFRSF1A, is a member of CD family, tumor necrosis factor receptor superfamily. CD120a is one of the most primary receptors for the tumor necrosis factor-alpha. It has been shown to be localized to both plasma membrane lipid rafts and the trans golgi complex with the help of the death domain (DD). CD120a can activate the transcription factor NF- $\kappa$ B, mediate apoptosis, and regulate inflammation processes.

### Reference

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- Cottin V,et al.(2002) Restricted localization of the TNF receptor CD120a to lipid rafts: a novel role for the death domain. The journal of immunology. 168: 4095-102.

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