

Recombinant Mouse soluble Tumor Necrosis Factor Receptor Type I/TNFRSF1A (Mouse sTNF RI/TNFRSF1A)

Product Information

Product Name	Cat#	Size
Recombinant Mouse soluble Tumor Necrosis Factor Receptor Type I/TNFRSF1A (Mouse sTNF RI/TNFRSF1A)	90625ES08	5 µg
	90625ES60	100 µg
	90625ES76	500 µg

Product Description

TNF receptor 1 (TNF RI; also called TNF R-p55/p60 and TNFRSF1A) is a 55 kDa type I transmembrane protein member of the TNF receptor superfamily, designated TNFRSF1A. Mouse TNF RI is a 454 amino acid (aa) protein that contains a 21 aa signal sequence, a 191 aa extracellular domain (ECD) with a PLAD (pre-ligand assembly domain) that mediates constitutive dimer/trimer formation, followed by four CRD (cysteine-rich domains), a 23 aa transmembrane domain, and a 219 aa cytoplasmic sequence that contains a neutral sphingomyelinase activation domain and a death domain. The ECD of mouse TNF RI shares 70%, 88%, 67%, 70% and 64% aa sequence identity with human, rat, canine, feline and porcine TNF RI, respectively. Both TNF RI and TNF RII (TNFRSF1B) are widely expressed and contain four TNF-alpha trimer-binding CRD in their ECD. However, TNF RI is thought to mediate most of the cellular effects of TNF-alpha. It is essential for proper development of lymph node germinal centers and Peyer's patches, and for combating intracellular pathogens such as Listeria. TNF RI is also a receptor for TNF-beta /TNFSF1B (lymphotoxin-alpha). TNF RI is stored in the Golgi and translocates to the cell surface following pro-inflammatory stimuli. TNF-alpha stabilizes TNF RI and induces its sequestering in lipid rafts, where it activates NF kappa B and is cleaved by ADAM-17/TACE. Release of the 28-34 kDa TNF RI ECD also occurs constitutively and in response to products of pathogens such as LPS, CpG DNA or S. aureus protein A. Full-length TNF RI may also be released in exosome-like vesicles. Release helps to resolve inflammatory reactions, since it down-regulates cell surface TNF RI and provides soluble TNF RI to bind TNF-alpha. Exclusion from lipid rafts causes endocytosis of TNF RI complexes and induces apoptosis. Mutations of human TNF R1 can result in inflammatory episodes known as TRAPS (TNFR-associated periodic syndrome).

Product Properties

Synonyms	CD120a; FPF; p55
Accession	P25118
GeneID	21937
Source	E.coli-derived Mouse sTNF RI/TNFRSF1A, Ile22-Ala212.
Molecular Weight	Approximately 21.1 kDa.
AA Sequence	IHPSGVTGLV PSLGDREKRD SLCPQGKYVH SKNNSICCTK CHKGTYLVSD CPSPGRD TVC RECEKGTFTA SQNYLRQCLS CKTCRKEMSQ VEISPCQADK DTVCGCKENQ FQRYLSETHF QCVCDCSPCFN GTVTIPCKET QNTVCNCHAG FFLRESECVP CSHCKKNEEC MKLCLPPPLA NVTNPQDSGT A
Tag	None
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	> 97 % by SDS-PAGE and HPLC analyses.

Biological Activity	The ED ₅₀ as determined by its ability to inhibit the TNF- α mediated cytotoxicity in the L-929 cells is less than 1 μ g/mL, corresponding to a specific activity of > 1000 IU/mg in the presence of 0.1 ng/mL of rMuTNF- α . Fully biologically active when compared to standard.
Endotoxin	< 0.1 EU per 1 μ g of the protein by the LAL method.
Formulation	Lyophilized from a 0.2 μ m filtered concentrated solution in PBS, pH7.4. We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom.
Reconstitution	Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at \leq -20°C. Further dilutions should be made in appropriate buffered solutions.

Shipping and Storage

The products are shipped with ice pack and can be stored at -20°C to -80°C for 1 year.

Recommend to aliquot the protein into smaller quantities when first used and avoid repeated freeze-thaw cycles.

Cautions

1. Avoid repeated freeze-thaw cycles.
2. For your safety and health, please wear lab coats and disposable gloves for operation.
3. For research use only!