

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

### Product Information

Product Name	Cat#	Size
Recombinant Human soluble Tumor Necrosis Factor Receptor Type I/TNFRSF1A (Human sTNF RI/TNFRSF1A)	90618ES08	5μg
	90618ES60	100μg
	90618ES76	500μg

### 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. Human TNF RI is a 455 amino acid (aa) protein that contains a 21 aa signal sequence and 190 aa 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 221 aa cytoplasmic sequence that contains a neutral sphingomyelinase activation domain and a death domain. The ECD of human TNF RI shows 70%, 69%, 80%, 80%, and 73% aa identity with mouse, rat, canine, feline and porcine TNF RI, respectively; and it shows 23% aa identity with the ECD of TNF RII. 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.

### Product Properties

<b>Synonyms</b>	Human sTNF RI
<b>Accession</b>	P19438
<b>GeneID</b>	7132
<b>Source</b>	E.coli-derived Human sTNF RI protein,Ile22-Thr211.
<b>Molecular Weight</b>	Approximately 21.2 kDa.
<b>AA Sequence</b>	IYPSGVIGLV PHLGDREKRD SVCPQGKYIH PQNNSICCTK CHKGTYLYND CPGPGQDTDC RECESGSFTA SENHLRHCLS CSKCRKEMGQ VEISSCTVDR DTVCGCRKNQ YRHYWSENLF QCFNCSLCLN GTVHLSCQEK QNTVCTCHAG FFLRENECVS CSNCKKSLEC TKLCLPQIEN VKGTEDSGTT
<b>Tag</b>	None
<b>Physical Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Purity</b>	> 97 % by SDS-PAGE and HPLC analyses.

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<b>Biological Activity</b>	Fully biologically active when compared to standard. The ED <sub>50</sub> as determined by its ability to inhibit the TNF-alpha mediated cytotoxicity in the L-929 cells is less than 0.05 µg/mL, corresponding to a specific activity of $> 2 \times 10^4$ IU/mg in the presence of 0.25 ng/mL of rHuTNF-alpha.
<b>Endotoxin</b>	< 0.1 EU per 1µg of the protein by the LAL method.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS, pH 7.4. We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom.
<b>Reconstitution</b>	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.

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## 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.