Datasheet for ABIN2666863

Soluble Tumor Necrosis Factor Receptor Type 2 (sTNF-R2) (AA 24-206), (N-Term) (Active) Protein

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Overview

Quantity:	10 µg
Target:	Soluble Tumor Necrosis Factor Receptor Type 2 (sTNF-R2)
Protein Characteristics:	AA 24-206, N-Term
Origin:	Human
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Biological Activity:	Active
Application:	Flow Cytometry (FACS)

Product Details

Purity:	> 95 % , as determined by Coomassie stained SDS-PAGE.
Sterility:	0.22 µm filtered
Endotoxin Level:	Less than 0.01 ng per µg cytokine as determined by the LAL method.

Target Details

Target:	Soluble Tumor Necrosis Factor Receptor Type 2 (sTNF-R2)
Alternative Name:	sTNF-RII (sTNF-R2 Products)
Background:	The biological effects of TNF are mediated by two cell surface TNF receptors, TNF-RI and TNF-RII. TNF-RI and TNF-RII are structurally related but functionally distinct. Also, TNF-RI is widely expressed on most cells, whereas TNF-RII is more restricted and is primarily expressed in hematopoietic cells and cells of the immune system. The function of TNF-RII is less understood

Target Details

	and has fewer biological effects than TNF-RI. Unlike TNF-RI, TNF-RII does not have death domain and will induce NF-κB activation through a different pathway. It is generally accepted that TNF-RI induces both apoptosis and survival pathways and TNF-RII induces only survival pathway. Only membrane-bound TNF can active TNF-RII effectively. Soluble TNF can bind TNF-RII but can not induce TNF-RII signaling. Upon binding of TNF, TNF-RII will form a trimer and recruit TRAF2, therefore leading to activation of NF-κB. In T cells, TNF-RII costimulation provides survival signals during the differentiation program trigger by TCR-mediated stimulation and also during clonal expansion in response to intracellular bacterial pathogens. Both TNF-RI and TNF-RII can be released from cell surface by ectodomain shedding. The resulting soluble TNF-RI and TNF-RII can bind TNF with high affinity and modulate TNF effects. An in vitro study showed that both TNF-RI and TNF-RII are constitutively released from monocytes. LPS stimulation can further increase soluble TNF-RII release. It has been reported that association of TNF-RII polymorphism with some lymphomas, solid tumors, and autoimmune diseases. The plasma level of soluble TNF-RII is increased in obese people and is related to insulin resistance. In addition, recombinant Fc-tagged soluble TNF-RII has been used to treat rheumatoid arthritis.
Molecular Weight:	The 184 amino acid recombinant protein has a predicted molecular mass of approximately 20 kDa. The DTT-reduced protein migrates at approximately 21 kDa and the non-reduced protein migrates at approximately 19 kDa by SDS-PAGE. The N-terminal amino acid is

Application Details

Application Notes:	Optimal working dilution should be determined by the investigator.
Comment:	Biological activity: ED50 is 0.15-0.5 µg/ml, corresponding to a specific activity of 2-6 x 103 units/mg, as determined by a dose-dependent inhibition of 0.25 ng/ml TNF-α induced cytotoxicity in L929 mouse fibroblast cells in the presence of 4 µg/ml actinomycin D.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Reconstitution:	For maximum results, quick spin vial prior to opening. Stock solutions should be prepared at no less than 10 µg/mL in sterile buffer (PBS, HPBS, DPBS, and EBSS) containing carrier protein such as 1 % BSA or HSA. After dilution, the cytokine can be stored between 2 °C and 8 °C for one month or from -20 °C to -70 °C for up to 3 months.

Handling

Buffer:	0.22 µm filtered protein solution is in PBS.
Handling Advice:	Avoid repeated freeze/thaw cycles.
Storage:	-20 °C
Storage Comment:	Unopened vial can be stored between 2°C and 8°C for three months, at -20°C for six months, or at -70°C for one year.