

## Recombinant Human TNF-alpha/TNFSF2

### Information

<b>Alternate Names</b>	Tumor Necrosis Factor-alpha, Human TNF- $\alpha$ , rHuTNF- $\alpha$ /TNFSF2, Cachectin, Differentiation-inducing factor, DIF
<b>Gene ID</b>	7124
<b>Accession #</b>	P01375
<b>AA Sequence</b>	MVRSSSRTPS DKPVAHVVAN PQAEGQLQWL NRRANALLAN GVLRDNLQV VPSEGLYLIY SQVLFGQGC PSTHVLLTHT ISRIAVSYQT KVNLLSAIKS PCQRETPEGA EAKPWYEPIY LGGVFQLEKG DRLSAEINRP DYLDFAESGQ VYFGIIL
<b>Molecular Weight</b>	Approximately 17.5 kDa, a single non-glycosylated polypeptide chain containing 158 amino acids.
<b>Source</b>	<i>Escherichia coli</i>
<b>Biological Activity</b>	Fully biologically active when compared to standard. The ED <sub>50</sub> as determined by a cytotoxicity assay using murine L929 cells is less than 0.05 ng/ml, corresponding to a specific activity of $> 2.0 \times 10^7$ IU/mg in the presence of actinomycin D.

### Components and Storage

Components	10 $\mu$ g	50 $\mu$ g	100 $\mu$ g	1 mg
Recombinant Human TNF-alpha/TNFSF2 (1 mg/mL)	10 $\mu$ L	50 $\mu$ L	100 $\mu$ L	1 mL
Store the components at -20 °C.				

<b>Physical Appearance</b>	This product is supplied dissolved in PBS buffer
<b>Stability &amp; Storage</b>	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. - 12 months from date of receipt, -20 to -70 °C as supplied. - 1 month, 2 to 8 °C under sterile conditions after reconstitution. - 3 months, -20 to -70 °C under sterile conditions after reconstitution.

### Quality Control

<b>Purity</b>	> 98 % by SDS-PAGE and HPLC analyses
<b>Endotoxin</b>	Less than 0.1 EU/ $\mu$ g of rHuTNF- $\alpha$ /TNFSF2 as determined by LAL method.

## ■ Description

Tumor necrosis factor alpha (TNF- $\alpha$ ), also called cachectin, is the best-known member of the TNF-family, which can cause cell death. This protein is produced by neutrophils, activated lymphocytes, macrophages, NK cells, LAK cells, astrocytes endothelial cells, smooth muscle cells and some transformed cells. TNF- $\alpha$  occurs as a secreted, soluble form and as a membrane-anchored form, both of which are biologically active. The naturally-occurring form of TNF- $\alpha$  is glycosylated, but non-glycosylated recombinant TNF- $\alpha$  has comparable biological activity. The biologically active native form of TNF- $\alpha$  is reportedly a trimer. Human and murine TNF- $\alpha$  show approximately 79 % homology at the amino acid level and cross-reactivity between the two species. Two types of receptors for TNF- $\alpha$  have been described and virtually all cell types studied show the presence of one or both of these receptor types.

## ■ Reference

1. Davenport C, Kenny H, Ashley DT, et al. 2012. Eur J Clin Invest, 42: 1173-9.
2. Cavalcanti YV, Brelaz MC, Neves JK, et al. 2012. Pulm Med, 2012: 745483.
3. Sheng WS, Hu S, Ni HT, et al. 2005. J Leukoc Biol, 78: 1233-41.
4. Berthold-Losleben MandHimmerich H. 2008. Curr Neuropharmacol, 6: 193-202.

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