Datasheet

Cat. No. PH1010

Recombinant Human TNF-alpha/TNFSF2

Information

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

Components and Storage

Physical Appearance	This product is supplied dissolved in PBS buffer
Stability & Storage	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

Purity	> 98 % by SDS-PAGE and HPLC analyses
Endotoxin	Less than 1.0 EU/μg of rHuTNF-α/TNFSF2 as determined by LAL method.

Description

Tumor necrosis factor alpha (TNF-α), also called cachectin, is the best-know 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-α occurs as a secreted, soluble form and as a membrane-anchored form, both of which are biologically active. The naturally-occurring form of TNF-α is glycosylated, but non-glycosylated recombinant TNF-α has comparable biological

activity. The biologically active native form of TNF-α is reportedly a trimer. Human and murine TNF-α show approximately 79 % homology at the amino acid level and cross-reactivity between the two species. Two types of receptors for TNF-α 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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