

# PRODUCT DATA SHEET



Bioworld Technology, Inc.

## Recombinant TNF- $\alpha$ , Human

Catalog Number: BK0171-10 $\mu$ g

Source: Escherichia coli.

Quantity: 10 $\mu$ g

### Description:

Tumor Necrosis Factor-alpha (TNF- $\alpha$ ) is a homotrimer with a subunit molecular mass of 17.3 kDa. Tumor Necrosis Factor-alpha (TNF- $\alpha$ ) plays a major role in growth regulation, differentiation, inflammation, viral replication, tumorigenesis, and autoimmune diseases; and in viral, bacterial, fungal, and parasitic infections. Besides inducing hemorrhagic necrosis of tumors, TNF has been found to be involved in tumorigenesis, tumor metastasis, viral replication, septic shock, fever, inflammation, and autoimmune diseases including Crohn's disease, and rheumatoid arthritis as well as graft-versus-host disease. Recombinant Human Tumor Necrosis Factor-alpha (TNF- $\alpha$ ) produced in E.coli is a single non-glycosylated polypeptide chain containing 157 amino acids. A fully biologically active molecule, rhTNF- $\alpha$  has a molecular mass of 17.3 kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques at GenScript.

### Molecular Weight:

17.3 kDa, observed by reducing SDS-PAGE.

### Purity:

> 98% as analyzed by SDS-PAGE and HPLC.

### Biological Activity:

ED50 < 30 pg/ml, measured in a cytotoxicity assay using L-929 mouse fibrosarcoma cells in the presence of the metabolic inhibitor actinomycin D, corresponding to a specific activity of > 3.3 x 10<sup>7</sup> units/mg.

### Physical Appearance:

Sterile Filtered White lyophilized (freeze-dried) powder.

### Formulation:

Lyophilized after extensive dialysis against PBS.

### AA Sequence:

VRSSSRTPSDKPVAVHVVANPQAEGQLQWLNR-  
RANALLANGVELRD-  
NQLVVPSEGLYLIYSQVLFKGGQCPSTHVLLTHTI  
SRIAVSYQTKVNLLSAIKSPCQRETPEGAEAKPW  
YEPIYLGGVFQLEKG-  
DRLSAEINRPDYLDFAESGQVYFGIIL

### Endotoxin:

Less than 0.2 EU/ $\mu$ g determined by LAL test.

### Reconstitution:

Reconstituted in ddH<sub>2</sub>O or PBS at 100  $\mu$ g/ml.

### Storage:

Lyophilized recombinant Human Tumor Necrosis Factor-alpha (TNF- $\alpha$ ), remains stable up to 6 months at -80  $^{\circ}$ C from date of receipt. Upon reconstitution, human TNF- $\alpha$  should be stable up to 1 week at 4 $^{\circ}$ C or up to 3 months at -20  $^{\circ}$ C.

### Usage:

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