## Recombinant Human TNF-alpha/TNFA Protein (aa 57-233, His Tag)

Catalog Number: PKSH033165



Note: Centrifuge before opening to ensure complete recovery of vial contents.

$\mathbf{r}$	escrip				
	00	OP	m		٦n
J		VI.		w	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

 Species
 Human

 Mol\_Mass
 21.8 kDa

 Accession
 P01375

**Bio-activity** Measured in a cytotoxicity assay using L- 929 mouse fibroblast cells in the presence

of the metabolic inhibitor actinomycin D. The  $ED_{50}$  for this effect is 30-150 pg/ml.

## **Properties**

**Purity** > 95 % as determined by reducing SDS-PAGE.

**Endotoxin** < 1.0 EU per µg of the protein as determined by the LAL method.

Storage Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80

°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of

reconstituted samples are stable at < -20°C for 3 months.

Shipping This product is provided as lyophilized powder which is shipped with ice packs.
 Formulation Lyophilized from a 0.2 μm filtered solution of 20mM PB, 100mM NaCl, pH 8.0.

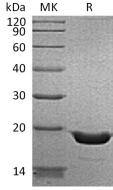
Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants

before lyophilization.

Please refer to the specific buffer information in the printed manual.

**Reconstitution** Please refer to the printed manual for detailed information.

#### Data



> 95 % as determined by reducing SDS-PAGE.

### Background

#### For Research Use Only

# Recombinant Human TNF-alpha/TNFA Protein (aa 57-233, His Tag)

Catalog Number: PKSH033165



Tumor Necrosis Factor-α (TNF-α) is secreted by macrophages; monocytes; neutrophils; T-cells; and NK-cells following stimulation by bacterial LPS. Cells expressing CD4 secrete TNF-α while cells that express CD8 secrete little or no TNF-α. Synthesis of TNF-α can be induced by many different stimuli including interferons; IL2; and GM-CSF. The clinical use of the potent anti-tumor activity of TNF-α has been limited by the proinflammatory side effects such as fever; dose-limiting hypotension; hepatotoxicity; intravascular thrombosis; and hemorrhage. Designing clinically applicable TNF-α mutants with low systemic toxicity has been of intense pharmacological interest. Human TNF-α that binds to murine TNF-R55 but not murine TNF-R7; exhibits retained anti-tumor activity and reduced systemic toxicity in mice compared with murine TNF-α; which binds to both murine TNF receptors. Based on these results; many TNF-α mutants that selectively bind to TNF-R55 have been designed. These mutants displayed cytotoxic activities on tumor cell lines in vitro and have exhibited lower systemic toxicity in vivo. Recombinant Human TNF-α High Active Mutant differs from the wild-type by amino acid substitution of amino acids 1-7 with Arg8; Lys9; Arg10 and Phe157. This mutant form has been shown to have increased activity with less inflammatory side effects in vivo.