Data Sheet (Cat.No.TMPK-00119)

TargetMol

TNF alpha Protein, Cynomolgus, Recombinant (His)

General Information

Synonyms:	TNF α;TNFα;APC1 protein;TNF-alpha;TNFA;TNF-α;TNFATNF;TNFSF1A;TNFSF2;TNFalpha;DIF;TNF;Cachectin
Protein Construction:	Val77-Leu233
Species:	Cynomolgus
Expression Host:	HEK293 Cells
Accession:	P79337
Molecular Weight:	18.35 kDa (predicted). Due to glycosylation, the protein migrates to 19-25 kDa based on Tris-Bis PAGE result.

QC Testing

Biological Activity:	1. Immobilized Cynomolgus TNF alpha, His Tag at 0.5μg/ml (100μl/well) on the plate. Dose response curve for Human TNFR1, hFc Tag with the EC50 of 6.5ng/ml determined by ELISA (QC Test). 2. Cynomolgus TNFR1, His Tag immobilized on CM5 Chip can bind Cynomolgus TNF alpha, His Tag with an affinity constant of 0.23 nM as determined in SPR assay.
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS (pH 7.4). Typically, 8% trehalose is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Tumor necrosis factor alpha (TNF-alpha), also known as cachectin and TNFSF2, is the prototypic ligand of the TNF

superfamily. It is a pleiotropic molecule that plays a central role in inflammation, immune system development, apoptosis, and lipid metabolism.Cytokine that binds to TNFRSF1A/TNFR1 and TNFRSF1B/TNFBR. It is mainly secreted by macrophages and can induce cell death of certain tumor cell lines. It is potent pyrogen causing fever by direct action or by stimulation of interleukin-1 secretion and is implicated in the induction of cachexia, Under certain conditions it can stimulate cell proliferation and induce cell differentiation.

Reference

Danese S, et al. Review article: the role of anti-TNF in the management of ulcerative colitis - past, present and future[J]. Alimentary Pharmacology & Therapeutics, 2013, 37(9):855-866.