Data Sheet (Cat.No.TMPY-05187)

TargetMol

TNF alpha Protein, Mouse, Recombinant, Biotinylated

General Information

Synonyms:	Tnfa;TNFSF2;Tnfsf1a;TNF-alpha;TNFalpha;DIF;TNFα;TNF-a;TNF-α;tumor necrosis factor
Protein Construction:	A DNA sequence encoding the mouse TNF (NP_038721.1) (Leu80-Leu235) was expressed, with an initial Met at the N-terminus. The purified protein was biotinylated in vitro. Predicted N terminal: Met
Species:	Mouse
Expression Host:	E. coli
Accession:	P06804
Molecular Weight:	17.4 kDa (predicted)

QC Testing

Biological Activity:	1.Immobilized Recombinant Mouse TNFR1/CD120a/TNFRSF1A Protein (Fc Tag) (Cat#TMPY-02535) at 5 μg/mL (100 μL/well) can bind Recombinant Mouse TNF-alpha/TNFA Protein, Biotinylated (Cat#TMPY-05187), the EC50 is 3-15 ng/mL (QC tested). 2.Immobilized Anti-TNFa (Adalimumab Biosimilar) at 5 μg/mL (100 μL/well) can bind Recombinant Mouse TNF-alpha/TNFA Protein, Biotinylated (Cat#TMPY-05187), the EC50 is 3-15 ng/mL (Routinely tested).
Purity:	> 95 % as determined by SDS-PAGE.
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 Sterile PBS. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

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 TNF, TNFA or TNFSF2, is the prototypic cytokine of the TNF superfamily, and is a multifunctional molecule involved in the regulation of a wide spectrum of biological processes including cell proliferation, differentiation, apoptosis, lipid metabolism, and coagulation. Two receptors, TNF-R1 (TNF receptor type 1; CD120a; p55/60) and TNF-R2 (TNF receptor type 2; CD120b; p75/80), bind to TNF-alpha. TNF-alpha protein is produced mainly by macrophages, and large amounts of this cytokine are released in response to lipopolysaccharide, other bacterial products, and Interleukin-1 (IL-1). TNF-alpha is involved in fighting against the tumorigenesis, thus, is regarded as a molecular insight in cancer treatment.TNF-alpha Protein & AntibodyCancer ImmunotherapyImmune CheckpointImmunotherapyTargeted Therapy

Reference

Hector J, et al. (2007) TNF-alpha alters visfatin and adiponectin levels in human fat. Horm Metab Res. 39(4): 250-5.
Berthold-Losleben M, et al. (2008) The TNF-alpha System: Functional Aspects in Depression, Narcolepsy and Psychopharmacology. Curr Neuropharmacol. 6(3): 193-202.