Data Sheet (Cat.No.TMPY-01396)

TargetMol

TLR3 Protein, Mouse, Recombinant (His)

General Information

Synonyms: toll like receptor 3;Tlr3;AI957183

Protein Construction: Thr26-Leu705

Species: Mouse

Expression Host: HEK293 Cells

Accession: Q99MB1

Molecular Weight: 78.7 kDa (predicted); 85-110 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity: Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.

Purity: > 97 % 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 PBS, pH 7.4. 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:

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

Toll-like receptor 3 (TLR3) also known as CD283 (cluster of differentiation 283) is a member of the Toll-like receptor family of pattern recognition receptors of the innate immune system. TLR3/CD283 plays a fundamental role in pathogen recognition and activation of innate immunity. TLR3 is a nucleotide-sensing TLR that is activated by double-stranded RNA, a sign of viral infection. TLRs are highly conserved from Drosophila to humans and share

structural and functional similarities. They recognize pathogen-associated molecular patterns (PAMPs) that are expressed on infectious agents, and mediate the production of cytokines necessary for the development of effective immunity. The various TLRs exhibit different patterns of expression. This receptor is most abundantly expressed in placenta and pancreas, and is restricted to the dendritic subpopulation of the leukocytes. It recognizes dsRNA associated with viral infection, and induces the activation of NF-kappaB and the production of type I interferons. It may thus play a role in host defense against viruses.Cancer ImmunotherapyImmune CheckpointImmunotherapyTargeted Therapy

Reference

Muzio M,et al.. (2000) Differential expression and regulation of toll-like receptors (TLR) in human leukocytes: selective expression of TLR3 in dendritic cells. J Immunol. 164(11): 5998-6004.
Doyle S,et al.. (2002) IRF3 mediates a TLR3/TLR4-specific antiviral gene program. Immunity. 17(3): 251-63.
Choe J,et al.. (2005) Crystal structure of human toll-like receptor 3 (TLR3) ectodomain. Science. 309(5734): 581-5.