Data Sheet (Cat.No.TMPY-02930)

TargetMol

TLR2 Protein, Mouse, Recombinant (His)

General Information

Synonyms:	toll-like receptor 2;Ly105
Protein Construction:	A DNA sequence encoding the mouse TLR2 (Q9QUN7) (Met1-Gln587) was fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Gln 25
Species:	Mouse
Expression Host:	Baculovirus Insect Cells
Accession:	Q9QUN7
Molecular Weight:	64.8 kDa (predicted); 65 kDa (reducing conditions)

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:	> 90 % 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 20 mM Tris, 500 mM NaCl, pH 7.4, 10% gly. 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:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

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

TLR2, also known as CD282, is a member of the Toll-like receptor (TLR) family. TLRs are highly conserved from Drosophila to humans and share structural and functional similarities. They play a fundamental role in pathogen recognition and activation of innate immunity. 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. TLR2 contains 14 LRR (leucine-rich)

repeats and 1 TIR domain. TLR2 gene is expressed most abundantly in peripheral blood leukocytes, and mediates host response to Gram-positive bacteria and yeast via stimulation of NF-kappaB. CD282 cooperates with LY96 to mediate the innate immune response to bacterial lipoproteins and other microbial cell wall components. It also cooperates with TLR1 to mediate the innate immune response to bacterial lipoproteins or lipopeptides. CD282 acts via MYD88 and TRAF6, leading to NF-kappa-B activation, cytokine secretion and the inflammatory response. It may also promote apoptosis in response to lipoproteins.

Reference

Do KN, et al. (2012) TLR2 controls intestinal carcinogen detoxication by CYP1APLoS ONE. 7 (3): e32309.
Dziarski R, et al. (2001) Role of MD-2 in TLR2- and TLR4-mediated recognition of Gram-negative and Gram-positive bacteria and activation of chemokine genes. J Endotoxin Res. 6 (5): 401-5.
Lorenz E, (2007) TLR2 and TLR4 expression during bacterial infections. Curr Pharm Des. 12 (32): 4185-93.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481