Recombinant TLR2 protein (His tag)

Catalog Number	546509
Synonyms	Toll/interleukin-1 receptor-like protein 4; CD antigen CD282
Species	Human
Expression System	E. coli
Accession	O60603
Molecular Weight	Predictes a molecular mass of 22.86 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 23 kDa band.

Product Information

Sequence Region	610-784
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 610-784 aa (O60603) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human TLR2 (Toll-like receptor 2) Fragment (aa 610-784) is a high-purity protein designed for studying the Toll/Interleukin-1 receptor (TIR) domain. This fragment serves as an essential tool for investigating innate immune signaling pathways, particularly in response to bacterial lipoproteins and microbial components. Toll-like receptor 2 (TLR2), also known as CD282, is a key pattern recognition receptor in human innate immunity. It cooperates with LY96, TLR1, or TLR6 to detect bacterial lipoproteins, lipopeptides, and other microbial cell wall components. Upon ligand recognition, TLR2 activates signaling through MYD88 and TRAF6, leading to NF-κB activation, cytokine secretion, and inflammatory responses. The receptor forms specific clusters (TLR2:TLR6:CD14:CD36 for diacylated lipopeptides and TLR2:TLR1:CD14 for triacylated lipopeptides) that trigger cell surface signaling before being targeted to the Golgi apparatus in a lipid-raft dependent pathway. TLR2 is localized to the membrane and phagosome membrane as a single-pass type I membrane protein, with ligand-induced accumulation in membrane rafts being critical for its function. This recombinant fragment containing the TIR domain enables focused research on the intracellular signaling mechanisms of this important immune receptor.