

Recombinant Mouse TLR9 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51895

Size: 10ug, 100ug

Protein Name: Toll-like receptor 9 (CD antigen CD289)

Synonym: Tlr9

UniProt ID: Q9EQU3

UniProt Link: www.uniprot.org/uniprotkb/Q9EQU3/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 1032 AA

Molecular Weight: 116 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MVLRRRTLHPLSLLVQAAVLAETLALGTLPAFLPCELKPHGLVDCNWLFLKSVPRFSAAASCSNITRL
SLISNRIHHLHNSDFVHLSNLRQLNLKWNCPPTGLSPLHFSCHMTIEPRTFLAMRTLEELNLSYNGITT
VPRLPSSLVNLSSLHTNILLVDANSLAGLYSLRVLFMDGNCYKPNCTGAVKVTPGALLGLSNLTHLS
LKYNNTKVPRLPPSLEYLLVSYNLIVKLGPELANLTSLRVLDVGGNCRRCDHAPNPCIECGQKSL
HLHPETFHHLSHLEGLVLKDSSLHTLNSSWFQGLVNLVLDLSENFLYESITHTNAFQNLTRLRKLNL
SFNYRKKVSFARLHLASSFKNLVSLQELNMNGIFFRLLNKYTLRWLADLPKLHTLHLQMNFINQAQLS
IFGTFRALRFVDLSNDRISGPSTLSEATPEEADDAEQEELLADPHAPLSTPASKNFMDRCKNFKFT
MDLSRNNLVTIKPEMFVNLSRLQCLSLSHNSIAQAVNGSQFLPLTNLQVLDLSHNKLDLYHWKSFSEL
PQLQALDSYNSQPFSMKGIGHNFSFVTHLSMLQSLSLAHNDIHTRVSSHLSNSNSVRFLDFSGNGM
GRMWDEGGLYLHFFQGLSGLLKLDLSQNNLHILRPQNLDNLPKSLKLLSLRDNYLSFFNWTSLSFLP
NLEVLDLAGNQLKALTNGTLPNGTLLQKLDVSSNSIVSVVPAFFALAVELKEVNLSHNLIKTVDRSWF
GPIVMNLTVLDVRSNPLHCACGAAFVDLLLEVQTKVPGLANGVKCGSPGQLQGRSIFAQDLRLCLDE
VLSWDCFGLSLLAVAVGMVVPILHHLCGWDVWYCFHLCCLAWLPLLARSRRSAQTLPYDAFVVFDDKA
QSAVADWVYNELRVRLERERRRRALRLCLEDRDWLPGQTLFENLWASIYGSRKTLFVLAHTDRVSG
LLRTSFLLAQQRLLDRKDVVLVILRPDAHRSRYVRLRQRLCRQSVLFWPQQPNGQGQGFVAQLST
ALTRDNRHFYNQNFRCRGPTAE

3. Buffer Composition



Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Toll-like receptor 9 (CD antigen CD289) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Key component of innate and adaptive immunity (PubMed:31408613). TLRs (Toll-like receptors) control host immune response against pathogens through recognition of molecular patterns specific to microorganisms (PubMed:31408613). TLR9 is a nucleotide-sensing TLR which is activated by unmethylated cytidine-phosphate-guanosine (CpG) dinucleotides (PubMed:31408613). Acts via MYD88 and TRAF6, leading to NF-kappa-B activation, cytokine secretion and the inflammatory response (PubMed:14993594, PubMed:17474149, PubMed:18820679, PubMed:18931679, PubMed:21402738, PubMed:25686612). Also acts via ADCY7, leading to cyclic di-AMP (c-di-AMP) synthesis and activation of the NLRP3 inflammasome (PubMed:40419769). Plays a role in defense against systemic mouse cytomegalovirus infection (PubMed:14993594). Controls lymphocyte response to Helicobacter infection (PubMed:17474149). Upon CpG stimulation, induces B-cell proliferation, activation, survival and antibody production (By similarity).

Subcellular Localization: Endoplasmic reticulum membrane ; Single-pass type I membrane protein . Endosome . Lysosome . Cytoplasmic vesicle, phagosome . Note=Relocalizes from endoplasmic reticulum to endosome and lysosome upon stimulation with agonist (PubMed:18305481). Exit from the ER requires UNC93B1 (PubMed:18820679). Endolysosomal localization is required for proteolytic cleavage and subsequent activation (PubMed:18820679, PubMed:18931679). Intracellular localization of the active receptor may prevent from responding to self nucleic acid (PubMed:18820679).

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.