

Recombinant Human TLR8 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50977

Size: 10ug, 100ug

Protein Name: Toll-like receptor 8 (CD antigen CD288)

Synonym: TLR8, UNQ249/PRO286

UniProt ID: Q9NR97

UniProt Link: www.uniprot.org/uniprotkb/Q9NR97/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 1041 AA

Molecular Weight: 120 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MENMFLQSSMLTCIFLLISGSCELC AEENFSRSYPCDEKKQND SVIAECSNRRLQEV PQTVGKYVTE
LDLSDNFITHITNESFQGLQNLTKINLHNPNVQHQN GNPGIQSNGLNITDGAFLNLKNLRELLLEDNQ
LPQIPSGLPESLTEL SLIQNNIYNITKEGISRLINLKNLYLAWNCYFNKVCEKTNIEDGVFETLTNLELLS
LSFNLSHVPPKLPSSLRKFLSNTQIKYISEEDFKGLINLTLLDLSGNCPRCFNAPFPCVPCDGGASI
NIDRFAFQNLTLRLYNLSSTSLRKINAAWFKNMPHLKVLDFEFNYLVGEIASGAFLTMLPRLEILDLS
FNYIKGSYPQHINISRNFSKLLSLRALHLRGYVFQELREDDFQPLMQLPNLSTINLGINFIKQIDFKLFQ
NFSNLEIILSENRIPLVKDTRQSYANSSSFQRHIRKRRSTD FEFDPHSNFYHFTRPLIKPQCAAYGK
ALDLSLNSIFFIGPNQFENLPDIACNL SANSNAQVLSGTEFSAIPHVKYLDLTNNRLDFDNASALTELS
DLEVLDLSYN SHYFRIAGVTHHLEFIQNFTNLKVLNLSHNNIYTLTDKYNLESKSLVELVFSGNRLDIL
WNDDDNRYISIFKGLKNLTRLDSLNLRLKHIPNEAFLNLPASLTELHINDNMLKFFNWTLLQQFPRLEL
LDLRGNKLLFLTDSLSDFTSSLRTLLLSHNRISHLP SGFLSEVSSLKHLDLSSNLLKTINKSALETKTTT
KLSMLELHGNPFECTCDIGDFRRWMDEHLNVKIPRLVDVICASPGDQRGKSIVSLELTTCVSDVTAVI
LFFFTFFITTMVMLAALAHHLFYWDVWFIYNVCLAKVKGYRSLSTSQT FYDAYISYDTKDASVTDWVI
NELRYHLEESRDKNVLLCLEERDWD PGLAIIDNLMQSINQSKKTVFVLTKKYAKSWNFKTA FYLALQR
LMDENMDVIIFILLEPVLQHSQYLRLRQRICKSSILQWPDNPKAEGLFWQTLRNVVLTENDSRYNNMY
VDSIKQY

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 8 (CD antigen CD288) 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: Endosomal receptor that plays a key role in innate and adaptive immunity (PubMed:25297876, PubMed:32433612). Controls host immune response against pathogens through recognition of RNA degradation products specific to microorganisms that are initially processed by RNASET2 (PubMed:31778653). Recognizes GU-rich single-stranded RNA (GU-rich RNA) derived from SARS-CoV-2, SARS-CoV-1 and HIV-1 viruses (PubMed:33718825). Upon binding to agonists, undergoes dimerization that brings TIR domains from the two molecules into direct contact, leading to the recruitment of TIR-containing downstream adapter MYD88 through homotypic interaction (PubMed:23520111, PubMed:25599397, PubMed:26929371, PubMed:33718825). In turn, the Myddosome signaling complex is formed involving IRAK4, IRAK1, TRAF6, TRAF3 leading to activation of downstream transcription factors NF-kappa-B and IRF7 to induce pro-inflammatory cytokines and interferons, respectively (PubMed:16737960, PubMed:17932028, PubMed:29155428).

Subcellular Localization: Endosome membrane ; Single-pass type I membrane protein .
Note=Endosomal localization confers distinctive proteolytic processing.

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.