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# Product datasheet

# Recombinant human TLR3 protein ab73825

### 3 References

**Description** 

Product name Recombinant human TLR3 protein

Biological activity

Biological Activity is determined by its ability to neutralize Poly I:C induced NF-κB signaling in HT-

29 cells stably transfected with NF- $\kappa$ B-luc. The ED50 for this effect is 5-10  $\mu$ g/ml.

Purity > 95 % SDS-PAGE.

Purity is greater than 95% by SDS-PAGE gel and HPLC analyses. Endotoxin level is less than

 $0.1 \text{ ng per } \mu g (1EU/\mu g).$ 

**Expression system** HEK 293 cells

Accession <u>O15455</u>

Protein length Protein fragment

Animal free No

**Nature** Recombinant

**Species** Human

Sequence STTKCTV SHEVADCSHL KLTQVPDDLP TNITVLNLTH

NQLRRLPAAN FTRYSQLTSL DVGFNTISKL EPELCQKLPM LKVLNLQHNE LSQLSDKTFA

FCTNLTELHL MSNSIQKIKN NPFVKQKNLI TLDLSHNGLS STKLGTQVQL ENLQELLLSN NKIQALKSEE LDIFANSSLK KLELSSNQIK EFSPGCFHAI GRLFGLFLNN VQLGPSLTEK LCLELANTSI RNLSLSNSQL STTSNTTFLG LKWTNLTMLD

LSYNNLNVVG NDSFAWLPQL EYFFLEYNNI

QHLFSHSLHG LFNVRYLNLK RSFTKQSISL ASLPKIDDFS FQWLKCLEHL NMEDNDIPGI KSNMFTGLIN LKYLSLSNSF TSLRTLTNET FVSLAHSPLH ILNLTKNKIS KIESDAFSWL GHLEVLDLGL NEIGQELTGQ EWRGLENIFE IYLSYNKYLQ

LTRNSFALVP SLQRLMLRRV ALKNVDSSPS

PFQPLRNLTI LDLSNNNIAN INDDMLEGLE KLEILDLQHN NLARLWKHAN PGGPIYFLKG LSHLHILNLE SNGFDEIPVE VFKDLFELKI IDLGLNNLNT LPASVFNNQV SLKSLNLQKN

LITSVEKKVF GPAFRNLTEL DMRFNPFDCT

CESIAWFVNW INETHTNIPE LSSHYLCNTP PHYHGFPVRL

**FDTS** 

Predicted molecular weight 77 kDa

Amino acids 24 to 704

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#### **Specifications**

Our **Abpromise guarantee** covers the use of **ab73825** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications SDS-PAGE

**Functional Studies** 

Form Lyophilized

#### **Preparation and Storage**

Stability and Storage Shipped at 4°C. Upon delivery aliquot. Store at -80°C. Avoid freeze / thaw cycle.

This product is an active protein and may elicit a biological response in vivo, handle with caution.

**Reconstitution** Reconstitute in water to a concentration of 0.1-1.0 mg/ml. Do not vortex. This solution can be

stored at 2-8oC for up to 1 week. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20oC to -

80oC.

#### **General Info**

modifications

Function Key component of innate and adaptive immunity. TLRs (Toll-like receptors) control host immune

response against pathogens through recognition of molecular patterns specific of

microorganisms. TLR3 is a nucleotide-sensing TLR which is activated by double-stranded RNA, a sign of viral infection. Acts via MYD88 and TRAF6, leading to NF-kappa-B activation, cytokine

secretion and the inflammatory response.

**Tissue specificity** Expressed at high level in placenta and pancreas. Also detected in CD11c+ immature dendritic

cells. Only expressed in dendritic cells and not in other leukocytes, including monocyte precursors. TLR3 is the TLR that is expressed most strongly in the brain, especially in astrocytes, glia, and

neurons.

Involvement in disease Defects in TLR3 are associated with herpes simplex encephalitis type 2 (HSE2) [MIM:613002].

HSE is a rare complication of human herpesvirus 1 (HHV-1) infection, occurring in only a small minority of HHV-1 infected individuals. HSE is characterized by hemorrhagic necrosis of parts of the temporal and frontal lobes. Onset is over several days and involves fever, headache, seizures, stupor, and often coma, frequently with a fatal outcome. Note=TLR3 mutations predispose

otherwise healthy individuals to isolated herpes simplex encephalitis through a mechanism that involves impaired IFNs production and reduced immune defense against viral infection in the

central nervous system.

**Sequence similarities**Belongs to the Toll-like receptor family.

Contains 22 LRR (leucine-rich) repeats.

Contains 1 LRRCT domain.
Contains 1 LRRNT domain.
Contains 1 TIR domain.

**Domain** ds-RNA binding is mediated by LRR 1 to 3, and LRR 17 to 18.

Post-translational Heavily N-glycosylated, except on that part of the surface of the ectodomain that is involved in

ligand binding.

**Cellular localization** Endoplasmic reticulum membrane. Endosome membrane.

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