

**PRODUCT INFORMATION**

<b>Target</b>	TLR4
<b>Synonyms</b>	ARMD10; CD284; TLR-4
<b>Description</b>	Human TLR4 full length protein-synthetic nanodisc
<b>Delivery</b>	In Stock
<b>Uniprot ID</b>	O00206
<b>Expression Host</b>	HEK293
<b>Protein Families</b>	Druggable Genome, Transmembrane
<b>Protein Pathways</b>	Toll-like receptor signaling pathway
<b>Molecular Weight</b>	The human full length TLR4 protein has a MW of 95.7 kDa
<b>Formulation &amp; Reconstitution</b>	Lyophilized from nanodisc solubilization buffer (20 mM Tris-HCl, 150 mM NaCl, pH 8.0). Normally 5% - 8% trehalose is added as protectants before lyophilization. Please see Certificate of Analysis for specific instructions. Do not use solvents with pH lower than 6.5 in subsequent experiments.
<b>Storage &amp; Shipping</b>	Store at -20°C to -80°C for 12 months in lyophilized form. After reconstitution, if not intended for use within a month, aliquot and store at -80°C (Avoid repeated freezing and thawing). Lyophilized proteins are shipped at ambient temperature.
<b>Background</b>	The protein is a member of the Toll-like receptor (TLR) family which plays a fundamental role in pathogen recognition and activation of innate immunity. TLRs are highly conserved from <i>Drosophila</i> to humans and share structural and functional similarities. They recognize pathogen-associated molecular patterns 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. In silico studies have found a particularly strong binding of surface TLR4 with the spike protein of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the causative agent of Coronavirus disease-2019 (COVID-19). This receptor has also been implicated in signal transduction events induced by lipopolysaccharide (LPS) found in most gram-negative bacteria. Mutations in this gene have been associated with differences in LPS responsiveness, and with susceptibility to age-related macular degeneration.
<b>Usage</b>	Research use only



### ELISA assay to evaluate TLR4-Nanodisc 0.2 $\mu$ g Human TLR4-Nanodisc per well

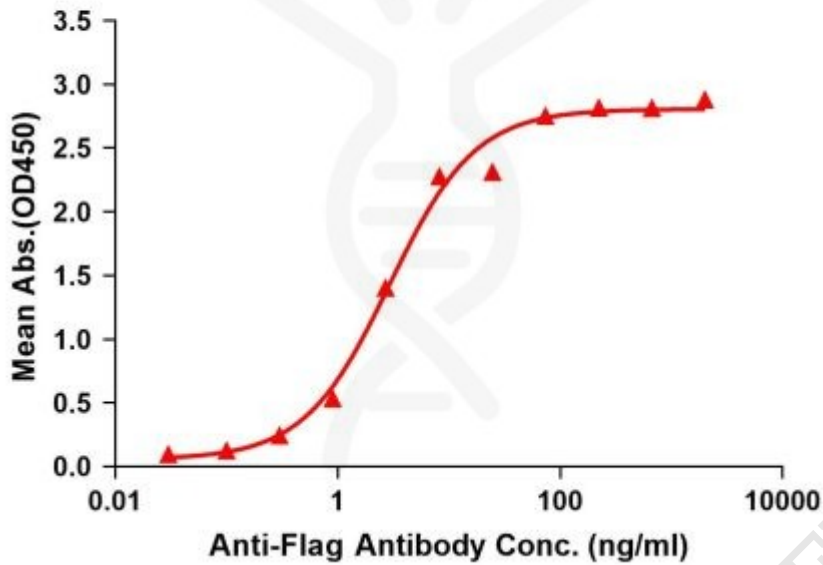


Figure1. Elisa plates were pre-coated with Flag Tag TLR4-Nanodisc (0.2 $\mu$ g/per well). Serial diluted anti-Flag monoclonal antibody solutions were added, washed, and incubated with secondary antibody before Elisa reading. From above data, the EC50 for anti-Flag monoclonal antibody binding with TLR4-Nanodisc is 2.939ng/ml.



Figure2. Human TLR4-Nanodisc, Flag Tag on SDS-PAGE

