

Datasheet for ABIN7538554

**TLR7 Protein****2** Images[Go to Product page](#)

## Overview

Quantity:	50 µg
Target:	TLR7
Origin:	Human
Source:	Mammalian Cells
Protein Type:	Synthetic Nanodisc

## Product Details

Purpose:	Human TLR7 full length protein-synthetic nanodisc
Characteristics:	Unlike other membrane scaffold protein (MSP) Nanodisc on the market, our synthetic Nanodisc can be prepared directly from the cells. The polymers used during this process have a dual function. It dissolves the cell membranes, like the detergent, and uses cellular phospholipids to form Nanodisc around the membrane proteins. The target protein embedded Nanodiscs can then be purified.

## Target Details

Target:	TLR7
Alternative Name:	TLR7 ( <a href="#">TLR7 Products</a> )
Background:	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 Drosophila to humans and share structural and functional similarities. The human TLR family comprises 11 members. They recognize pathogen-associated molecular patterns (PAMPs) that are expressed on infectious agents, and mediate the production of cytokines necessary for the

## Target Details

development of effective immunity. For the recognition of structural components in foreign microorganisms, the various TLRs exhibit different patterns of expression as well, in this way for example, TLR-3, -7, and -8 are essential in the recognition of single-stranded RNA viruses. TLR7 senses single-stranded RNA oligonucleotides containing guanosine- and uridine-rich sequences from RNA viruses, a recognition occurring in the endosomes of plasmacytoid dendritic cells and B cells.

Molecular Weight: The human full length TLR7 protein has a MW of 120.9 kDa

UniProt: [Q9NYK1](#)

Pathways: [TLR Signaling](#), [Activation of Innate immune Response](#), [Toll-Like Receptors Cascades](#)

## Application Details

Comment: Advantages of Synthetic Nanodiscs:

- Highly purified membrane proteins
- High solubility in aqueous solutions
- High stability
- Proteins are in a native membrane environment and remain biologically active
- No detergent and can be used for cell-based assays
- No MSP backbone proteins

Limitations of Synthetic Nanodiscs:

- Intolerant to acids and high concentrations of divalent metal ions

Restrictions: For Research Use only

## Handling

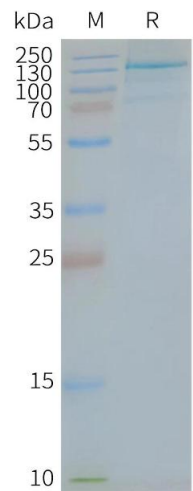
Format: Lyophilized

Buffer: 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.

Storage: -20 °C, -80 °C

Storage Comment: 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.

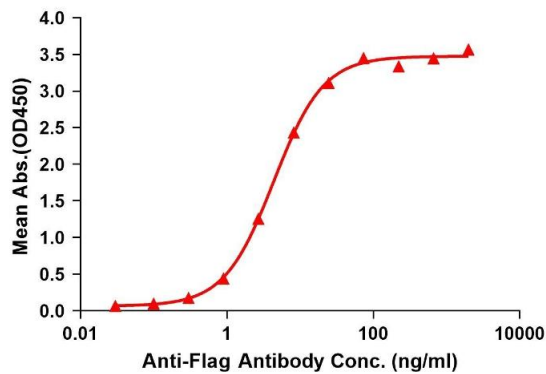
Expiry Date: 12 months



SDS-PAGE

Image 1. Human -Nanodisc, Flag Tag on SDS-PAGE

ELISA assay to evaluate TLR7-Nanodisc  
0.2µg Human TLR7-Nanodisc per well



ELISA

Image 2. Elisa plates were pre-coated with Flag Tag - Nanodisc (0.2 µg/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 -Nanodisc is 4.389 ng/mL.