

**PRODUCT INFORMATION**

<b>Tag</b>	C-Flag Tag
<b>Target</b>	MDR-1
<b>Synonyms</b>	ABCB1; CD243; CLCS; GP170; MDR1; p-170; P-GP; PGY1
<b>Description</b>	Human MDR-1 full length protein-synthetic nanodisc
<b>Delivery</b>	In Stock
<b>Uniprot ID</b>	P08183
<b>Expression Host</b>	HEK293
<b>Protein Families</b>	Druggable Genome, ES Cell Differentiation/IPS, Transmembrane
<b>Protein Pathways</b>	ABC transporters
<b>Molecular Weight</b>	The human full length MDR-1 protein has a MW of 141.5 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 a pH below 6.5 or those containing high concentrations of divalent metal ions (greater than 5 mM) 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 membrane-associated protein encoded by this gene is a member of the superfamily of ATP-binding cassette (ABC) transporters. ABC proteins transport various molecules across extra- and intra-cellular membranes. ABC genes are divided into seven distinct subfamilies (ABC1, MDR/TAP, MRP, ALD, OABP, GCN20, White). This protein is a member of the MDR/TAP subfamily. Members of the MDR/TAP subfamily are involved in multidrug resistance. The protein encoded by this gene is an ATP-dependent drug efflux pump for xenobiotic compounds with broad substrate specificity. It is responsible for decreased drug accumulation in multidrug-resistant cells and often mediates the development of resistance to anticancer drugs. This protein also functions as a transporter in the blood-brain barrier. Mutations in this gene are associated with colchicine resistance and Inflammatory bowel disease 13. Alternative splicing and the use of alternative promoters results in multiple transcript variants.
<b>Usage</b>	Research use only
<b>Conjugate</b>	Unconjugated



**ELISA assay to evaluate MDR-1-Nanodisc**  
0.2 $\mu$ g Human MDR-1-Nanodisc per well

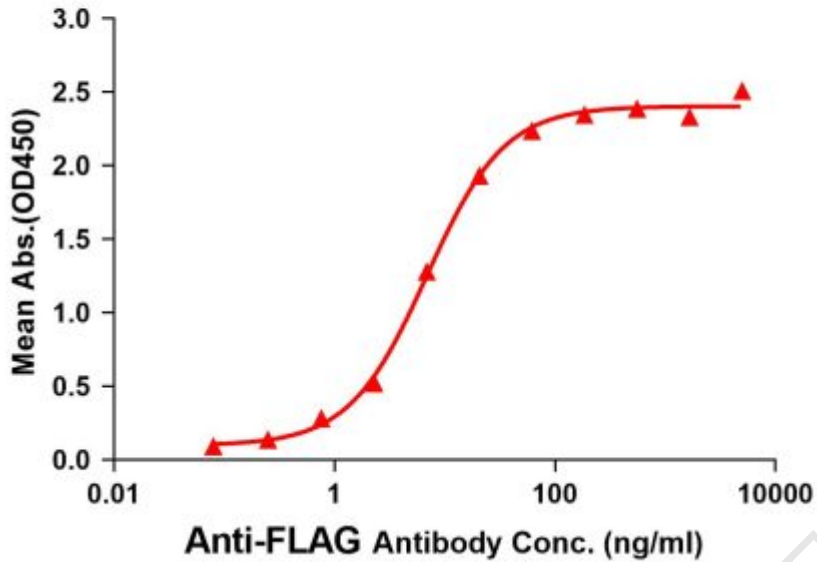


Figure1. Elisa plates were pre-coated with Flag Tag MDR-1-Nanodisc (0.2 $\mu$ g/per well). Serial diluted anti-Flag monoclonal antibody solutions were added, washed, and incubated with secondary antibody before Elisa reading. From above data, the EC50 for anti-Flag monoclonal antibody binding with MDR-1-Nanodisc is 6.883ng/ml.

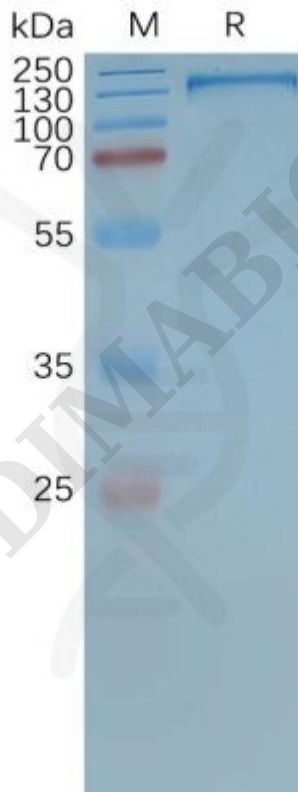


Figure2. Human MDR-1-Nanodisc, Flag Tag on SDS-PAGE

