

## PRODUCT INFORMATION

<b>Tag</b>	C-Flag Tag
<b>Target</b>	GPR75
<b>Synonyms</b>	GPRchr2; WI31133
<b>Description</b>	Human $\beta$ 2AR-GPR75-BRIL full length protein-synthetic nanodisc
<b>Delivery</b>	In Stock
<b>Uniprot ID</b>	O95800
<b>Expression Host</b>	HEK293
<b>Protein Families</b>	Druggable Genome, GPCR, Transmembrane
<b>Protein Pathways</b>	N/A
<b>Molecular Weight</b>	The human full length $\beta$ 2AR-GPR75-BRIL protein has a MW of 59.4 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 of reconstitution.
<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>	GPR75 is a member of the G protein-coupled receptor family and is a novel target for the clinical treatment of obesity. Human GPR75 haploinsufficiency exhibits a striking phenotype of low body fat, and GPR75 knockout mice are hypophagic and thin, improving glucose tolerance and insulin sensitivity. To enhance the expression level of GPR75, twenty-four amino acids from the $\beta$ 2AR receptor (MGQPGNGSAFLLAPNRSHAPDHV) were used to replace the original residues 1-31 in a modified version of the GPR75 receptor. Furthermore, the BRIL sequence was used to replace the original ICL3 loop (237-306) to enhance receptor stability. BRIL is thermostabilized apocytochrome b562 with mutations M7W, H102I, R106L, PDB ID 1M6T.
<b>Usage</b>	Research use only
<b>Conjugate</b>	Unconjugated



**ELISA assay to evaluate  $\beta$ 2AR-GPR75-BRIL-Nanodisc**

0.2 $\mu$ g Human  $\beta$ 2AR-GPR75-BRIL-Nanodisc per well

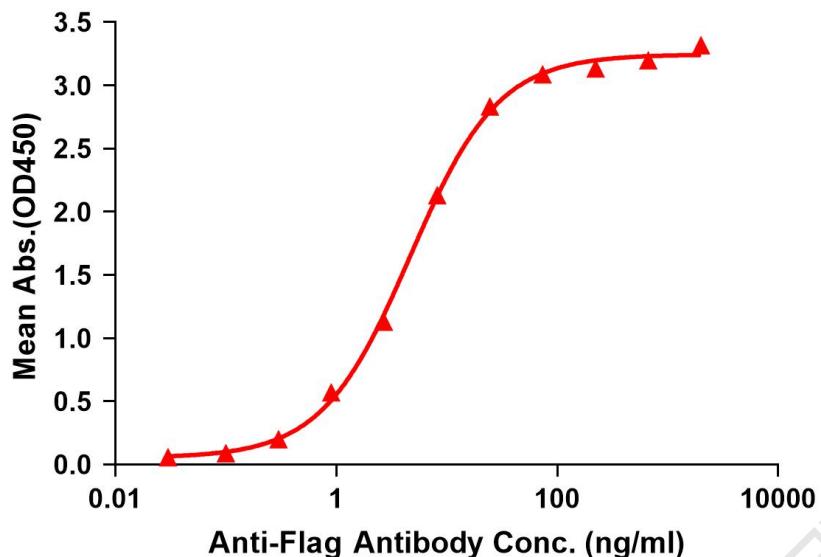


Figure 1. Elisa plates were pre-coated with Flag Tag  $\beta$ 2AR-GPR75-BRIL-Nanodisc (0.2 $\mu$ g/per well). Serial diluted anti-Flag monoclonal antibody solutions were added, washed, and incubated with secondary antibody before Elisa reading. From above data, the EC50 for anti-Flag monoclonal antibody binding with  $\beta$ 2AR-GPR75-BRIL-Nanodisc is 4.678ng/ml.

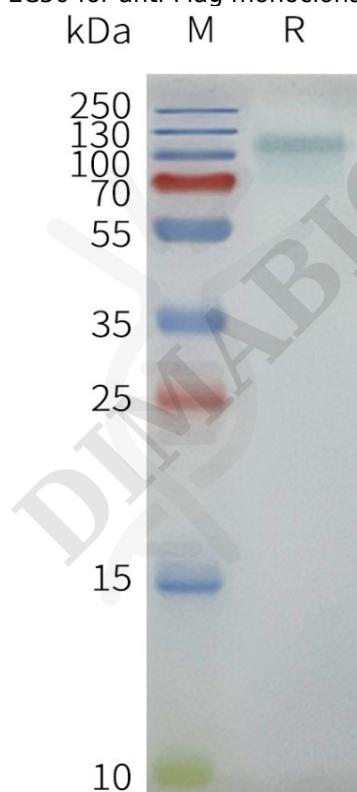


Figure 2. Human  $\beta$ 2AR-GPR75-BRIL-Nanodisc, Flag Tag on SDS-PAGE

