

PRODUCT INFORMATION

Tag	C-Flag Tag
Expression Host	HEK293
Target	GPR75
Synonyms	GPRchr2; WI31133
Description	Human beta2AR-GPR75-BRIL full length protein-synthetic nanodisc
Uniprot ID	O95800
Protein Families	Druggable Genome, GPCR, Transmembrane
Protein Pathways	N/A
Molecular Weight	The human full length beta2AR-GPR75-BRIL protein has a MW of 59.4 kDa
Delivery	In Stock
Formulation & Reconstitution	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.
Sterility	Products are supplied non-sterile. For cell culture applications, dilute in appropriate medium and sterile-filter (0.22 µm) prior to use.
Storage&Shipping	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.
Background	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 beta2AR receptor (MGQPGNGSAFLLAPNRSHAPDHDV) were used to replace the original residues1-31 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.
Usage	Research use only
Conjugate	Unconjugated



ELISA assay to evaluate β 2AR-GPR75-BRIL-Nanodisc 0.2 μ g Human β 2AR-GPR75-BRIL-Nanodisc per well

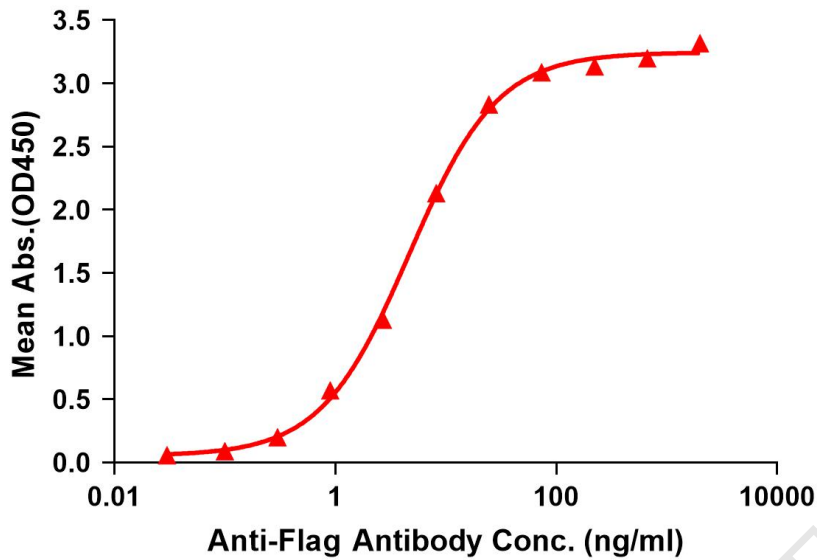


Figure 1. Elisa plates were pre-coated with Flag Tag beta2AR-GPR75-BRIL-Nanodisc (0.2 μ g/per well). Serial diluted anti-Flag monoclonal antibody solutions were added, washed, and incubated with secondary antibody before Elisa reading. From above data, the EC50 for anti-Flag monoclonal antibody binding with beta2AR-GPR75-BRIL-Nanodisc is 4.678ng/ml.



Figure 2. Human beta2AR-GPR75-BRIL-Nanodisc, Flag Tag on SDS-PAGE

