

**PRODUCT INFORMATION**

|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tag</b>                              | C-Flag Tag                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Target</b>                           | GPR75                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Synonyms</b>                         | GPRchr2; WI31133                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Description</b>                      | Human BRIL-GPR75 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 BRIL-GPR75 protein has a MW of 70.3 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>                       | 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. The BRIL sequence was added to the N-terminal of GPR75 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 BRIL-GPR75-Nanodisc 0.2µg Human BRIL-GPR75-Nanodisc per well

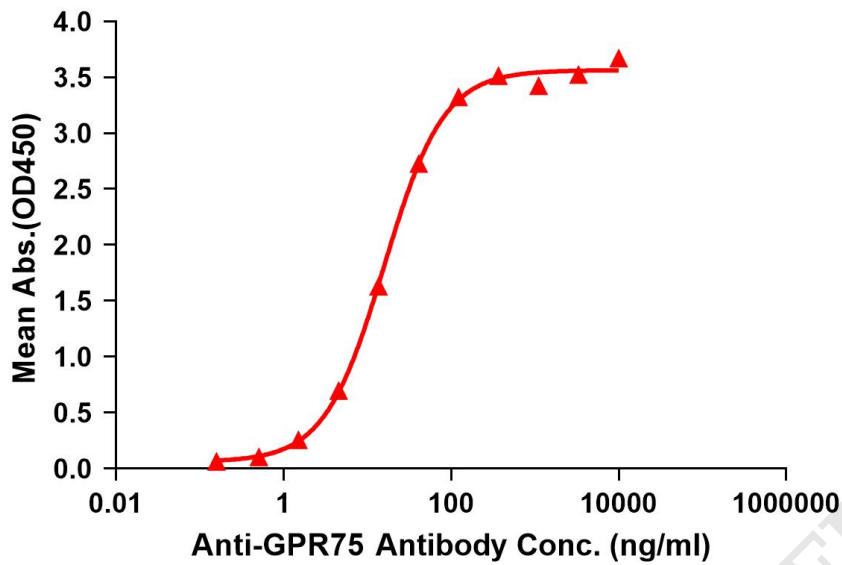


Figure 1. Elisa plates were pre-coated with C-Flag Tag BRIL-GPR75-Nanodisc (0.2µg/per well). Serial diluted anti-GPR75 monoclonal antibody (DMC100368) solutions were added, washed, and incubated with secondary antibody before Elisa reading. From above data, the EC50 for anti-GPR75 monoclonal antibody binding with BRIL-GPR75-Nanodisc is 15.94ng/ml.

kDa M R



Figure 2. WB analysis of BRIL-GPR75-Nanodisc with anti-GPR75 monoclonal antibody (DMC100368), followed by Goat Anti-Human IgG HRP at 1/5000 dilution

