

**PRODUCT INFORMATION**

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|---|---|
| <b>Tag</b>                              | C-Flag Tag  |
| <b>Target</b>                           | OR3A1   |
| <b>Synonyms</b>                         | OLFRA03; OR17-40; OR17-82; OR40   |
| <b>Description</b>                      | Human OR3A1 full length protein-synthetic nanodisc  |
| <b>Delivery</b>                         | In Stock  |
| <b>Uniprot ID</b>                       | P47881  |
| <b>Expression Host</b>                  | HEK293  |
| <b>Protein Families</b>                 | Druggable Genome, Transmembrane   |
| <b>Protein Pathways</b>                 | Olfactory transduction  |
| <b>Molecular Weight</b>                 | The human full length OR3A1 protein has a MW of 34.6 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>                       | Olfactory receptors interact with odorant molecules in the nose, to initiate a neuronal response that triggers the perception of a smell. The olfactory receptor proteins are members of a large family of G-protein-coupled receptors (GPCR) arising from single coding-exon genes. Olfactory receptors share a 7-transmembrane domain structure with many neurotransmitter and hormone receptors and are responsible for the recognition and G protein-mediated transduction of odorant signals. The olfactory receptor gene family is the largest in the genome. The nomenclature assigned to the olfactory receptor genes and proteins for this organism is independent of other organisms. |
| <b>Usage</b>                            | Research use only   |
| <b>Conjugate</b>                        | Unconjugated  |



### ELISA assay to evaluate OR3A1-Nanodisc 0.2 $\mu$ g Human OR3A1-Nanodisc per well

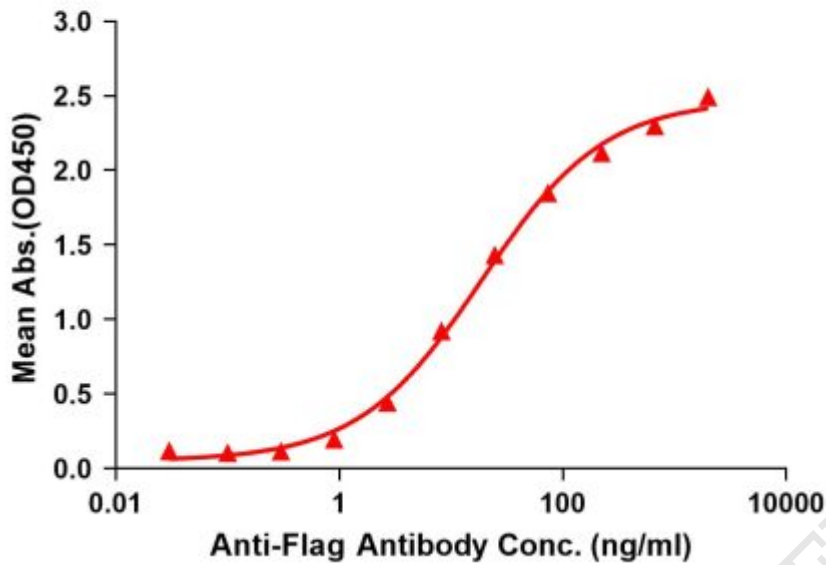


Figure1. Elisa plates were pre-coated with Flag Tag OR3A1-Nanodisc (0.2 $\mu$ g/per well). Serial diluted anti-Flag monoclonal antibody solutions were added, washed, and incubated with secondary antibody before Elisa reading. From above data, the EC50 for anti-Flag monoclonal antibody binding with OR3A1-Nanodisc is 18.77ng/ml.



Figure2. WB analysis of Human OR3A1-Nanodisc with anti-Flag monoclonal antibody at 1/5000 dilution, followed by Goat Anti-Rabbit IgG HRP at 1/5000 dilution

