

PRODUCT INFORMATION

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|---------------------------------|---|
| Tag                             | C-Flag Tag  |
| Target                          | V2R   |
| Synonyms                        | ADHR, DI1, DIR, DIR3, NDI, NDI1, V2R  |
| Description                     | Human V2R full length protein-synthetic nanodisc  |
| Delivery                        | 6~8weeks  |
| Uniprot ID                      | P30518  |
| Expression Host                 | HEK293  |
| Protein Families                | GPCR,Transmembrane,Druggable Genome,  |
| Protein Pathways                | GPCRDB Class A Rhodopsin-like,Peptide<br>GPCRs,Cancer,Metabolic and Obesity,  |
| Molecular Weight                | The human full length V2R protein has a MW of<br>40.3kDa  |
| Formulation &<br>Reconstitution | Lyophilized from nanodisc solubilization buffer (20<br>mM Tris-HCl, 150 mM NaCl, pH 8.0). Normally 5%<br>- 8% trehalose is added as protectants before<br>lyophilization. Please see Certificate of Analysis<br>for specific instructions of reconstitution.  |
| Storage&Shipping                | Store at -20°C to -80°C for 12 months in<br>lyophilized form. After reconstitution, if not<br>intended for use within a month, aliquot and store<br>at -80°C (Avoid repeated freezing and thawing).<br>Lyophilized proteins are shipped at ambient<br>temperature.  |
| Background                      | This gene encodes the vasopressin receptor, type<br>2, also known as the V2 receptor, which belongs<br>to the seven-transmembrane-domain G protein-<br>coupled receptor (GPCR) superfamily, and couples<br>to Gs thus stimulating adenylate cyclase. The<br>subfamily that includes the V2 receptor, the V1a<br>and V1b vasopressin receptors, the oxytocin<br>receptor, and isotocin and mesotocin receptors in<br>non-mammals, is well conserved, though several<br>members signal via other G proteins. All bind<br>similar cyclic nonapeptide hormones. The V2<br>receptor is expressed in the kidney tubule,<br>predominantly in the distal convoluted tubule and<br>collecting ducts, where its primary property is to<br>respond to the pituitary hormone arginine<br>vasopressin (AVP) by stimulating mechanisms<br>that concentrate the urine and maintain water<br>homeostasis in the organism. When the function<br>of this gene is lost, the disease Nephrogenic<br>Diabetes Insipidus (NDI) results. The V2 receptor<br>is also expressed outside the kidney although its<br>tissue localization is uncertain. When these<br>'extrarenal receptors' are stimulated by infusion<br>of a V2 selective agonist (dDAVP), a variety of<br>clotting factors are released into the bloodstream.<br>The physiologic importance of this property is not<br>known - its absence does not appear to be<br>detrimental in NDI patients. The gene expression<br>has also been described in fetal lung tissue and<br>lung cancer associated with alternative splicing.<br>[provided by RefSeq, Jul 2008] |
| Usage                           | Research use only   |
| Conjugate                       | Unconjugated  |

