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Product datasheet for TA328919

Hcrtr2 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IF, IHC, WB
Recommended Dilution:	WB: 1:200-1:2000; IHC: 1:100-1:3000
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide CSPAPGSWLNLSHVDGN, corresponding to amino acid residues 22-38 of the rat ?Âμ-Opioid recePeptide (C)DRLARGRTSTESRKS, corresponding to amino acid residues 391-405 of rat OX2R . Intracellular, C-terminus.ptor . Extracellular, N-terminus.
Formulation:	Lyophilized. Concentration before lyophilization ~0.8mg/ml (lot dependent, please refer to CoA along with shipment for actual concentration). Buffer before lyophilization: Phosphate buffered saline (PBS), pH 7.4, 1% BSA, 0.025% NaN3.
Reconstitution Method:	Add 50 ul double distilled water (DDW) to the lyophilized powder.
Purification:	Affinity purified on immobilized antigen.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	hypocretin receptor 2
Database Link:	NP_037206 Entrez Gene 3062 HumanEntrez Gene 387285 MouseEntrez Gene 25605 Rat P56719

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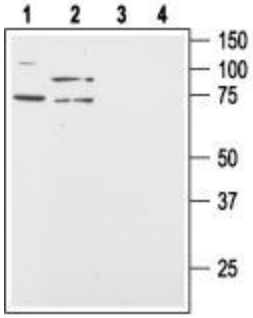
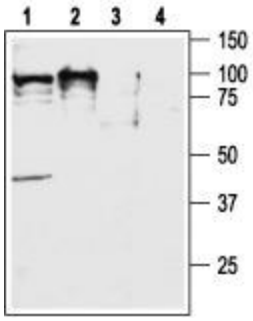
Background: Orexin Receptor 2 (OX2R) (also known as hypocretin receptor 2) is one of two receptors that recognize the peptide neurotransmitters orexin A and orexin B.Orexin A and B are 33 and 28 amino acids in length, respectively, and are derived from a common precursor termed prepro-orexin.OX2R binds both orexin A and B with similar affinities while OX1R binds orexin A with greater affinity than orexin B (a one order of magnitude difference).Both OX2R and OX1R belong to the 7-transmembrane domain, G protein-coupled receptor (GPCR) superfamily. OX2R is thought to transmit signals through the Ga11 class of G proteins, resulting in the activation of phospholipase C with subsequent triggering of the phosphatidylinositol cascade and an influx of extracellular Ca2+, probably through transient receptor potential (TRP) channels. OX2R can also transmit signals through inhibitory Gi G proteins, although the mechanism is less well understood.The physiological functions of the orexin system (OX1R, OX2R, and their ligands) have been a matter of intense research over the last few years. OX2R is expressed in both the central nervous system and peripheral locations such as gastrointestinal tissues, pancreas, and testis.The best studied physiological role of OX2R is its involvement in the regulation of sleep and wakefulness states. Studies in mice lacking the orexin gene and dogs expressing a mutation of the OX2R show a remarkably similar phenotype to human narcolepsy, a condition characterized by excessive daytime sleepiness, inability to maintain vigilant states, and defects in the regulation of rapid eye movement (REM) sleep.In addition, the orexin system is involved in regulating autonomic functions such as blood pressure and heart rate, as well as in mechanisms that regulate the reward response in the brain.

Synonyms: OX2R

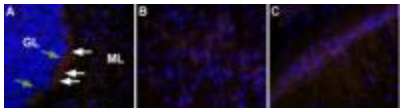
Product images:



Western blot analysis of human Colo-205 (lanes 1 and 3) and HT-29 (lanes 2 and 4) colon cancer cell lysates: 1, 2. Anti-Orexin Receptor 2 antibody, (1:200). 3, 4. Anti-Orexin Receptor 2 antibody, preincubated with the control peptide antigen.



Western blot analysis of rat (lanes 1 and 3) and mouse (lanes 2 and 4) brain lysates: 1, 2. Anti-Orexin Receptor 2 antibody, (1:400). 3, 4. Anti-Orexin Receptor 2 antibody, preincubated with the control peptide antigen.



IHC staining of rat brain using Anti-Orexin Receptor 2 antibody, 1:50, followed by goat anti-rabbit-AlexaFluor-555 secondary antibody (1:500), (red). A. In the cerebellum, staining is present in cell bodies of both Golgi type I (white arrows) and Golgi type II (green arrows) neurons. Staining is also present in fibers in the molecular layer (ML). B. In the parietal cortex, staining is evident in neural cell bodies. C. In the hippocampus, staining is present in pyramidal cells in the CA1 layer.

Expression of OX2R in human colon cancer cells. Immunocytochemical staining of paraformaldehyde-fixed and permeabilized human Colo-205 colon cancer cells using Anti-Orexin Receptor 2 antibody, (1:500), followed by goat-anti-rabbit-AlexaFluor-555 secondary antibody (red). B. Live view of the same field as in (A). C. Nuclei were visualized with the cell permeable dye Hoechst 33342 (blue).