Dopamine D2 Receptor Blocking Peptide

PRODUCT OVERVIEW

Product Name	Dopamine D2 Receptor (DRD2), Blocking Peptide
Full Product Name	Dopamine D2 Receptor Peptide
Product Gene Name	DRD2 blocking peptide
Product Synonym Names	D(2) dopamine receptor; D2 dopamine receptor; D2DR; D2R; Dopamine D2 receptor; DRD2 antibody
Clonality	Polyclonal
Host	Rabbit
Form/Format	Antigenic Blocking Peptide
Concentration	Quantity: 250 ug; Volume: 100 ul (lot specific)
Preparation and Storage	-20• degree C for long term storage
Antibody/Peptide Pairs	Dopamine D2 Receptor peptide (MBS543465) is used for blocking the activity of D2 Receptor antibody (MBS541390)
Antibody/Peptide Pairs	Dopamine D2 Receptor peptide (MBS543465) is used for blocking the activity of D2 Receptor antibody (MBS541391)
Molecular Weight	50,847 Da
OMIM	103780
Immunogen	Synthetic peptide corresponding to unique sequence on human Dopamine D2 Receptor protein.
Molecular Function	Dopamine Binding; Potassium Channel Regulator activity; Identical Protein binding
Structure	Forms homo- and heterooligomers with DRD4. The interaction with DRD4 may modulate agonist-induced downstream signaling. Interacts with GPRASP1, PPP1R9B and CLIC6 (By similarity). Interacts with CADPS and CADPS2. Interacts with ARRB2 (By similarity). Interacts with KCNA2 (By similarity). Interacts with GNAI1 (PubMed:17264214). Interacts with GNAI2 isoform sGi2, the interaction allows the creation of an intracellular pool of DRD2 that can be released to cell surface upon agonist stimulation. Interacts with HTR2A.
Subcellular Location	Cell membrane; Multi-pass membrane protein
Applications Tested/Suitable for DRD2 blocking peptide	Immunodepletion, Immunocompetition
Application Notes for DRD2 blocking peptide	Immunocytochemistry: 1:200 Immunofluorescence: 1:200 Immunohistochemistry: 1:200 Western Blot: 1:1,000-1:1,5000
Related Product Information for DRD2 blocking peptide	Antigenic Blocking Peptide Dopamine Receptor subtype D2 Dopamine receptor whose activity is mediated by G proteins which inhibit adenylyl cyclase.
Other Notes	Small volumes of DRD2 blocking peptide vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for DRD2 purchase	MBS543465 is a blocking peptide targeting DRD2. Also known as Dopamine D2 Receptor Peptide. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for DRD2. It may not necessarily be applicable to this product.

NCBI GI #	553269
NCBI GeneID	1813
NCBI Accession #	AAA52328
UniProt Primary Accession #	P14416
UniProt Secondary Accession #	Q9NZR3; Q9UPA9
UniProt Related Accession #	P14416
NCBI Official Full Name	dopamine D2 receptor, partial
NCBI Official Synonym Full Names	dopamine receptor D2
NCBI Official Symbol	DRD2
NCBI Official Synonym Symbols	D2R; D2DR
UniProt Protein Name	D(2) dopamine receptor
UniProt Synonym Protein Names	Dopamine D2 receptor
Protein Family	D(2) dopamine receptor
UniProt Gene Name	DRD2
UniProt Entry Name	DRD2_HUMAN
NCBI Protein Information	D(2) dopamine receptor
NCBI Summary for DRD2	This gene encodes the D2 subtype of the dopamine receptor. This G-protein coupled receptor inhibits adenylyl cyclase activity. A missense mutation in this gene causes myoclonus dystonia; other mutations have been associated with schizophrenia. Alternative splicing of this gene results in two transcript variants encoding different isoforms. A third variant has been described, but it has not been determined whether this form is normal or due to aberrant splicing. [provided by RefSeq, Jul 2008]

UniProt Comments for DRD2	DRD2: Dopamine receptor whose activity is mediated by G proteins which inhibit adenylyl cyclase. Defects in DRD2 are associated with dystonia type 11 (DYT11); also known as alcohol-responsive dystonia. DYT11 is a myoclonic dystonia. Dystonia is defined by the presence of sustained involuntary muscle contractions, often leading to abnormal postures. DYT11 is characterized by involuntary lightning jerks and dystonic movements and postures alleviated by alcohol. Inheritance is autosomal dominant. The age of onset, pattern of body involvement, presence of myoclonus and response to alcohol are all variable. Belongs to the G-protein coupled receptor 1 family. 3 isoforms of the human protein are produced by alternative splicing. Protein type: Membrane protein, integral; Membrane protein, multi-pass; Receptor, GPCR; GPCR, family 1 Chromosomal Location of Human Ortholog: 11q23 Cellular Component: acrosome; axon; cytosol; dendrite; dendritic spine; endocytic vesicle; integral to plasma membrane; intracellular; lateral plasma membrane; nerve terminal; nonmotile primary cilium; perikaryon; plasma membrane; postsynaptic density; synaptic vesicle membrane Molecular Function: adrenoceptor activity; dopamine binding; dopamine D2 receptor-like receptor activity; drug binding; identical protein binding; ionotropic glutamate receptor binding; potassium channel regulator activity; protein binding; protein heterodimerization activity; protein homodimerization activity Biological Process: activation of protein kinase activity; adenohypophysis development; adult walking behavior; arachidonic acid secretion; associative learning; auditory behavior; axonogenesis; behavioral response to cocaine; behavioral response to ethanol; branching morphogenesis of a nerve; cellular calcium ion homeostasis; cerebral cortex GABAergic interneuron migration; circadian regulation of gene expression; dopamine metabolic process; dopamine receptor, adenylate cyclase inhibiting pathway; dopamine receptor, phospholipase C activating pathway; elevation of cytosolic calcium ion concentration during G-protein signaling, coupled to IP3 second messenger (phospholipase C activating); feeding behavior; G-protein coupled receptor internalization; grooming behavior; locomotory behavior; long-term memory; negative regulation of adenylate cyclase activity; negative regulation of blood pressure; negative regulation of cell migration; negative regulation of cell proliferation; negative regulation of circadian sleep/wake cycle, sleep; negative regulation of dopamine receptor signaling pathway; negative regulation of dopamine secretion; negative regulation of innate immune response; negative regulation of insulin secretion; negative regulation of protein kinase B signaling cascade; negative regulation of protein secretion; negative regulation of synaptic transmission, glutamatergic; nerve-nerve synaptic transmission; orbitofrontal cortex development; peristalsis; phosphatidylinositol metabolic process; pigmentation; positive regulation of cytokinesis; positive regulation of dopamine uptake; positive regulation of G-protein coupled receptor protein signaling pathway; positive regulation of growth hormone secretion; positive regulation of multicellular organism growth; positive regulation of neuroblast proliferation; positive regulation of receptor internalization; positive regulation of transcription from RNA polymerase II promoter; prepulse inhibition; protein localization; reduction of cytosolic calcium ion concentration; regulation of cAMP metabolic process; regulation of dopamine secretion; regulation of dopamine uptake; regulation of heart rate; regulation of long-term neuronal synaptic plasticity; regulation of phosphoprotein phosphatase activity; regulation of potassium ion transport; regulation of sodium ion transport; regulation of synapse structural plasticity; regulation of synaptic transmission, GABAergic; regulation of systemic arterial blood pressure by neurological process; release of sequestered calcium ion into cytosol; response to amphetamine; response to axon injury; response to cocaine; response to drug; response to hypoxia; response to inactivity; response to iron ion; response to light stimulus; response to morphine; response to nicotine; response to toxin; sensory perception of smell; striatum development; synaptic transmission, dopaminergic; synaptogenesis; thermoregulation; visual learning; Wnt receptor signaling pathway Disease: Myoclonic Dystonia
Research Articles on DRD2	**1.** Variation of the DRD2 genotype may modulate the psychosis-inducing effects of cannabis use.
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