

**Cnr1 antibody - C-terminal region**  
**Rabbit Polyclonal Antibody**  
**Catalog # AI14484****Specification**

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**Cnr1 antibody - C-terminal region - Product Information**

Application	WB
Primary Accession	<a href="#">P47746</a>
Other Accession	<a href="#">NM_007726</a> , <a href="#">NP_031752</a>
Reactivity	Human, Mouse, Rat, Rabbit, Pig, Horse, Bovine, Guinea Pig, Dog
Predicted	Human, Mouse, Rat, Pig, Chicken, Horse, Bovine, Guinea Pig, Dog
Host	Rabbit
Clonality	Polyclonal
Calculated MW	53kDa kDa

**Cnr1 antibody - C-terminal region - Additional Information****Gene ID** 12801**Alias Symbol** CB1, CB-R, CB1R  
**Other Names**  
Cannabinoid receptor 1, CB-R, CB1, Brain-type cannabinoid receptor, Cnr1**Format**

Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.

**Reconstitution & Storage**

Add 50 ul of distilled water. Final anti-Cnr1 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.

**Precautions**

Cnr1 antibody - C-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

**Cnr1 antibody - C-terminal region - Protein Information****Name** Cnr1**Function**

G-protein coupled receptor for cannabinoids, including endocannabinoids (eCBs), such as N-arachidonylethanolamide (also called anandamide or AEA) and 2-arachidonoylglycerol (2-AG) (PubMed: [22388959](http://www.uniprot.org/citations/22388959)), (PubMed: [9888857](http://www.uniprot.org/citations/9888857)). Mediates many cannabinoid-induced effects, acting, among others, on food intake, memory loss, gastrointestinal motility, catalepsy, ambulatory activity, anxiety, chronic pain (PubMed: [27828947](http://www.uniprot.org/citations/27828947)), (PubMed: [27828947](http://www.uniprot.org/citations/27828947)).

[9888857](http://www.uniprot.org/citations/9888857)). Signaling typically involves reduction in cyclic AMP (PubMed:[27828947](http://www.uniprot.org/citations/27828947), PubMed:[8832654](http://www.uniprot.org/citations/8832654)). In the hypothalamus, may have a dual effect on mitochondrial respiration depending upon the agonist dose and possibly upon the cell type. Increases respiration at low doses, while decreases respiration at high doses (PubMed:[25707796](http://www.uniprot.org/citations/25707796), PubMed:[27828947](http://www.uniprot.org/citations/27828947)). At high doses, CNR1 signal transduction involves G-protein alpha-i protein activation and subsequent inhibition of mitochondrial soluble adenylate cyclase, decrease in cyclic AMP concentration, inhibition of protein kinase A (PKA)-dependent phosphorylation of specific subunits of the mitochondrial electron transport system, including NDUFS2 (PubMed:[27828947](http://www.uniprot.org/citations/27828947)). In the hypothalamus, inhibits leptin-induced reactive oxygen species (ROS) formation and mediates cannabinoid- induced increase in SREBF1 and FASN gene expression (PubMed:[25869131](http://www.uniprot.org/citations/25869131)). In response to cannabinoids, drives the release of orexigenic beta- endorphin, but not that of melanocyte-stimulating hormone alpha/alpha- MSH, from hypothalamic POMC neurons, hence promoting food intake (PubMed:[25707796](http://www.uniprot.org/citations/25707796)). In the hippocampus, regulates cellular respiration and energy production in response to cannabinoids. Involved in cannabinoid-dependent depolarization-induced suppression of inhibition (DSI), a process in which depolarization of CA1 postsynaptic pyramidal neurons mobilizes eCBs, which retrogradely activate presynaptic CB1 receptors, transiently decreasing GABAergic inhibitory neurotransmission (PubMed:[22388959](http://www.uniprot.org/citations/22388959)). Also reduces excitatory synaptic transmission (PubMed:[27828947](http://www.uniprot.org/citations/27828947)). In superior cervical ganglions and cerebral vascular smooth muscle cells, inhibits voltage-gated Ca(2+) channels in a constitutive, as well as agonist-dependent manner (By similarity). In cerebral vascular smooth muscle cells, cannabinoid- induced inhibition of voltage-gated Ca(2+) channels leads to vasodilation and decreased vascular tone (By similarity). Induces leptin production in adipocytes and reduces LRP2-mediated leptin clearance in the kidney, hence participating in hyperleptinemia (PubMed:[22841573](http://www.uniprot.org/citations/22841573)). In adipose tissue, CNR1 signaling leads to increased expression of SREBF1, ACACA and FASN genes (PubMed:[15864349](http://www.uniprot.org/citations/15864349)). In the liver, activation by endocannabinoids leads to increased de novo lipogenesis and reduced fatty acid catabolism, associated with increased expression of SREBF1/SREBP-1, GCK, ACACA, ACACB and FASN genes (PubMed:[15864349](http://www.uniprot.org/citations/15864349), PubMed:[21987372](http://www.uniprot.org/citations/21987372)). May also affect de novo cholesterol synthesis and HDL-cholesteryl ether uptake (PubMed:[21987372](http://www.uniprot.org/citations/21987372)). Peripherally modulates energy metabolism. In high carbohydrate diet-induced obesity, may decrease the expression of mitochondrial dihydrolipoyl dehydrogenase/DLD in striated muscles, as well as that of selected glucose/ pyruvate metabolic enzymes, hence affecting energy expenditure through mitochondrial metabolism (PubMed:[26671069](http://www.uniprot.org/citations/26671069)). In response to cannabinoid anandamide, elicits a pro-inflammatory response in macrophages, which involves NLRP3 inflammasome activation and IL1B and IL18 secretion. In macrophages infiltrating pancreatic islets, this process may participate in the progression of type-2 diabetes and associated loss of pancreatic beta- cells (PubMed:[23955712](http://www.uniprot.org/citations/23955712)).

### Cellular Location

Cell membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:P21554}. Mitochondrion outer membrane. Cell projection, axon {ECO:0000250|UniProtKB:P20272}. Presynapse {ECO:0000250|UniProtKB:P20272}. Note=In CA1 hippocampal neurons, 15.5% of total protein is localized in mitochondria (PubMed:22388959). Found on presynaptic axon terminals in some

GABAergic neurons in the somatosensory cortex (By similarity). In striated muscles, predominantly located in mitochondria (PubMed:27826249). Unexpectedly, in the mitochondria, the C-terminus is located in the mitochondrial intermembrane space, a compartment topologically considered as extracellular. In canonical seven-transmembrane G-protein coupled receptors, the C-terminus is cytosolic (PubMed:22388959) {ECO:0000250|UniProtKB:P20272, ECO:0000269|PubMed:22388959, ECO:0000269|PubMed:27826249}

### Tissue Location

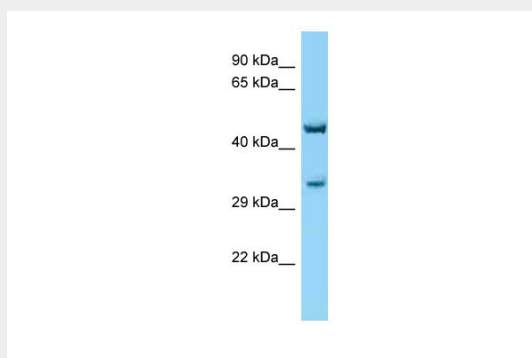
Expressed in brain neurons (at protein level) (PubMed:22388959). Detected throughout the striatum, cortex and hippocampus, with highest levels in the lateral striatum (PubMed:10891614, PubMed:15606779, PubMed:22388959). In rostral brain regions, high expression levels in the dorsal lateral striatum, while in the caudal brain regions, high levels are observed in the ventral lateral striatum (PubMed:10891614). Expressed in neurons (PubMed:10891614). In the hypothalamus, expressed in both GABAergic and glutamatergic presynaptic terminals of POMC neurons (at protein level) (PubMed:25707796, PubMed:25869131). Expressed in striated muscles, including skeletal muscles (gastrocnemius and rectus abdominis) and myocardium (at protein level) (PubMed:26671069, PubMed:27826249) Expressed in the liver, with highest levels in Kupffer cells and lower levels in endothelial cells as well as hepatocytes, particularly in perivascular areas (at protein level) (PubMed:15864349, PubMed:21987372). The hepatic expression level is up-regulated in obese mice compared to lean animals (PubMed:21987372)

### Cnr1 antibody - C-terminal region - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Cnr1 antibody - C-terminal region - Images



WB Suggested Anti-Cnr1 Antibody Titration: 1.0 µg/ml  
Positive Control: Mouse Spleen

### Cnr1 antibody - C-terminal region - References

Chakrabarti A., et al. DNA Seq. 5:385-388(1995).  
Ho B.Y., et al. Neurosci. Lett. 212:123-126(1996).

Ledent C.,et al.Science 283:401-404(1999).

McCaw E.A.,et al.Eur. J. Biochem. 271:4909-4920(2004).

Bonner T.I.,et al.Submitted (MAR-1995) to the EMBL/GenBank/DDBJ databases.