

Rabbit Cannabinoid Receptor I Polyclonal Antibody | anti-CNR1 antibody

Anti-Cannabinoid Receptor I antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA124638	Rabbit	Human, Mouse, Rat	Western Blot, Immunocytochemistry, Immunohistochemistry, Flow Cytometry, Functional Assay, ELISA

PRODUCT SYNONYMS

Cannabinoid Receptor I; Polyclonal Antibody; Anti-Cannabinoid Receptor I antibody; Cannabinoid receptor 1; CB-R; CB1; CANN6; CNR1; CNR; anti-CNR1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Specificity	No cross reactivity with other proteins.
Form/Format	Lyophilized; Contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Sequence Length	439
Applicable Applications for anti-CNR1 antibody	WB (Western Blot), ICC (Immunocytochemistry), IHC (Immunohistochemistry), FCM/FACS (Flow Cytometry), ELISA (Direct ELISA)
Immunogen	E Coli-derived human Cannabinoid Receptor I recombinant protein (Position: M1-Q75).
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
Preparation and Storage	Store at -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.

IMAGES



FCM/FACS (Flow Cytometry)

Figure 4. Flow Cytometry analysis of HeLa cells using anti-CNR1 antibody (AAA124638). Overlay histogram showing HeLa cells stained with AAA124638 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-CNR1 Antibody (AAA124638, 1ug/1x10⁶ cells) for 30 min at 20 degree C. DyLight[®]488 conjugated goat anti-rabbit IgG (5-10ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



IHC (Immunohistochemistry)

Figure 3. IHC analysis of Cannabinoid Receptor I using anti-Cannabinoid Receptor I antibody (AAA124638). Cannabinoid Receptor I was detected in paraffin-embedded section of rat small intestine tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-Cannabinoid Receptor I Antibody (AAA124638) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.



IHC (Immunohistochemistry)

Figure 2. IHC analysis of Cannabinoid Receptor I using anti-Cannabinoid Receptor I antibody (AAA124638). Cannabinoid Receptor I was detected in paraffin-embedded section of mouse small intestine tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-Cannabinoid Receptor I Antibody (AAA124638) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.



WB (Western Blot)

Figure 1. Western blot analysis of Cannabinoid Receptor I using anti-Cannabinoid Receptor I antibody (AAA124638). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: human 22RV1 whole cell lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Cannabinoid Receptor I antigen affinity purified polyclonal antibody at 0.5ug/mL overnight at 4 degree C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for Cannabinoid Receptor I at approximately 60KD. The expected band size for Cannabinoid Receptor I is at 53KD.

ADDITIONAL INFORMATION

Related Product Information for anti-CNR1 antibody

Description: The cannabinoid receptor type 1, often abbreviated as CB1, is a G protein-coupled cannabinoid receptor located primarily in the central and peripheral nervous system. This gene encodes one of two cannabinoid receptors. The cannabinoids, principally delta-9-tetrahydrocannabinol and synthetic analogs, are psychoactive ingredients of marijuana. The cannabinoid receptors are members of the guanine-nucleotide-binding protein (G-protein) coupled receptor family, which inhibit adenylate cyclase activity in a dose-dependent, stereoselective and pertussis toxin-sensitive manner. The two receptors have been found to be involved in the cannabinoid-induced CNS effects (including alterations in mood and cognition) experienced by users of marijuana. Multiple transcript variants encoding two different protein isoforms have been described for this gene.

Protein Function: G-protein coupled receptor for endogenous cannabinoids (eCBs), including N-arachidonylethanolamide (also called anandamide or AEA) and 2-arachidonoylglycerol (2-AG), as well as phytocannabinoids, such as delta(9)-tetrahydrocannabinol (THC) (PubMed: 15620723, PubMed: 27768894, PubMed: 27851727). Mediates many cannabinoid-induced effects, acting, among others, on food intake, memory loss, gastrointestinal motility, catalepsy, ambulatory activity, anxiety, chronic pain. Signaling typically involves reduction in cyclic AMP (PubMed: 1718258, PubMed: 21895628, PubMed: 27768894). 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. 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. In the hypothalamus, inhibits leptin-induced reactive oxygen species (ROS) formation and mediates cannabinoid-induced increase in SREBF1 and FASN gene expression. 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. 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. Also reduces excitatory synaptic transmission (By similarity). 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 (PubMed: 17895407). 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. In adipose tissue, CNR1 signaling leads to increased expression of SREBF1, ACACA and FASN genes (By similarity). 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. May also affect de novo cholesterol synthesis and HDL-cholesterol uptake. Peripherally modulates energy metabolism (By similarity). 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 (By similarity). In response to cannabinoid anandamide, elicits a proinflammatory response in macrophages, which involves NLRP3 inflammasome activation and IL1B and IL18 secretion (By similarity). 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).

NCBI AND UNIPROT INFORMATION

NCBI GI #	237681067
NCBI GeneID	1268
NCBI Accession #	NP_001153698.1
NCBI GenBank Nucleotide #	NM_001160226.1
UniProt Accession #	P21554; Q13949; Q495Z0; Q4PLI4; Q4VBM6; Q5JVL5; Q5UB37; Q9UNNO; B2R9T4; E1P512
NCBI Official Full Name	cannabinoid receptor 1 isoform a
NCBI Official Synonym Full Names	cannabinoid receptor 1
NCBI Official Symbol	CNR1
NCBI Official Synonym Symbols	CB1; CNR; CB-R; CB1A; CB1R; CANN6; CB1K5
NCBI Protein Information	cannabinoid receptor 1
UniProt Protein Name	Cannabinoid receptor 1
UniProt Gene Name	CNR1
UniProt Synonym Gene Names	CNR; CB-R; CB1

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/cannabinoid-receptor-i-antibody-western-blot-immunocytochemistry-immunohistochemistry-flow-cytometry-direct-elisa-elisa/124638>