

CB1 (C-11): sc-518035



The Power to Question

BACKGROUND

The cannabinoid receptors (CB1 and CB2) are G protein-coupled receptors that inhibit adenylate cyclase activity in response to psychoactive cannabinoids. CB1 is expressed in brain tissue and, in low levels, in testis. CB2 has been shown to be expressed only by cells of the immune system, specifically by HL-60 cells. The cannabinoid receptors mediate most of the cannabinoid-induced responses in a dose-dependent, stereoselective manner. Phosphorylation of CB1 on serine 316 leads to a disruption of CB1-mediated inhibition of calcium channels and activation of potassium currents. This response system is thought to be involved in specific brain functions, such as nociception, control of movement, memory, and neuroendocrine regulation as well as having a possible role in brain development. In addition, CB1 may mediate the addictive behavior involved with the use of psychoactive cannabinoids, such as THC in marijuana.

CHROMOSOMAL LOCATION

Genetic locus: CNR1 (human) mapping to 6q15; Cnr1 (mouse) mapping to 4 A5.

SOURCE

CB1 (C-11) is a mouse monoclonal antibody raised against amino acids 1-150 of CB1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CB1 (C-11) is available conjugated to agarose (sc-518035 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518035 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518035 PE), fluorescein (sc-518035 FITC), Alexa Fluor® 488 (sc-518035 AF488), Alexa Fluor® 546 (sc-518035 AF546), Alexa Fluor® 594 (sc-518035 AF594) or Alexa Fluor® 647 (sc-518035 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518035 AF680) or Alexa Fluor® 790 (sc-518035 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

CB1 (C-11) is recommended for detection of CB1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CB1 siRNA (h): sc-39910, CB1 siRNA (m): sc-39911, CB1 shRNA Plasmid (h): sc-39910-SH, CB1 shRNA Plasmid (m): sc-39911-SH, CB1 shRNA (h) Lentiviral Particles: sc-39910-V and CB1 shRNA (m) Lentiviral Particles: sc-39911-V.

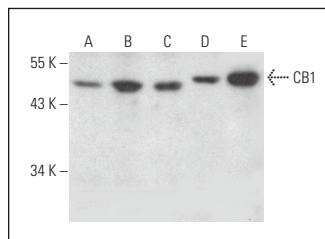
Molecular Weight of CB1: 63/54 kDa.

Positive Controls: Neuro-2A whole cell lysate: sc-364185, RAW 264.7 whole cell lysate: sc-2211 or THP-1 cell lysate: sc-2238.

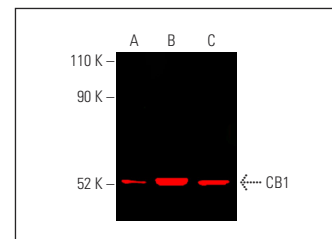
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



CB1 (C-11): sc-518035. Western blot analysis of CB1 expression in RAW 264.7 (A), Neuro-2A (B), F9 (C) and c4 (D) whole cell lysates and mouse cerebellum tissue extract (E).



CB1 (C-11): sc-518035. Near-Infrared western blot analysis of CB1 expression in HeLa (A) and THP-1 (B) whole cell lysates and mouse cerebellum tissue extract (C). Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG Fc BP-CFL 790: sc-533658.

SELECT PRODUCT CITATIONS

- Hirao-Suzuki, M., et al. 2018. Δ^9 -tetrahydrocannabinol upregulates fatty acid 2-hydroxylase (FA2H) via PPAR α induction: a possible evidence for the cancellation of PPAR β/δ -mediated inhibition of PPAR α in MDA-MB-231 cells. Arch. Biochem. Biophys. 662: 219-225.
- Amini, M., et al. 2020. Involvement of endocannabinoid system, inflammation and apoptosis in diabetes induced liver injury: role of 5-HT3 receptor antagonist. Int. Immunopharmacol. 79: 106158.
- Liu, X., et al. 2020. Pharmacological activation of CB2 receptor protects against ethanol-induced myocardial injury related to RIP1/RIP3/MLKL-mediated necroptosis. Mol. Cell. Biochem. 474: 1-14.
- Ye, L., et al. 2021. CB1R promotes chronic alcohol-induced neuronal necroptosis in mice prefrontal cortex. Alcohol Alcohol. 56: 230-239.
- Young, A.P. and Denovan-Wright, E.M. 2022. Synthetic cannabinoids reduce the inflammatory activity of microglia and subsequently improve neuronal survival *in vitro*. Brain Behav. Immun. 105: 29-43.
- Rivas-Santisteban, R., et al. 2023. The cannabinoid CB1 receptor interacts with the angiotensin AT2 receptor. Overexpression of AT2-CB1 receptor heteromers in the striatum of 6-hydroxydopamine hemilesioned rats. Exp. Neurol. 362: 114319.
- Marino, M., et al. 2023. The interplay between kisspeptin and endocannabinoid systems modulates male hypothalamic and gonadal control of reproduction *in vivo*. Front. Endocrinol. 14: 1269334.
- Calvino, C., et al. 2024. Maternal obesity induces sex-specific changes in the endocannabinoid system of the hypothalamus and dorsal hippocampus of offspring associated with anxiety-like behavior in adolescent female rats. Horm. Behav. 166: 105648.

RESEARCH USE

For research use only, not for use in diagnostic procedures.