SANTA CRUZ BIOTECHNOLOGY, INC.

CB2 (3C7): sc-293188



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 is expressed only by cells of the immune system. The cannabinoid receptors mediate most of the cannabinoid-induced responses in a dose-dependent, stereoselective manner. 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.

REFERENCES

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- 2. Gerard, C.M., et al. 1991. Molecular cloning of a human cannabinoid receptor which is also expressed in testis. Biochem. J. 179: 129-134.
- Munro, S., et al. 1993. Molecular characterization of a peripheral receptor for cannabinoids. Nature 365: 61-65.
- Shire, D., et al. 1996. Molecular cloning, expression and function of the murine CB2 peripheral cannabinoid receptor. Biochim. Biophys. Acta 1307: 132-136.
- Ledent, C., et al. 1999. Unresponsiveness to cannabinoids and reduced addictive effects of opiates in CB1 receptor knockout mice. Science 283: 401-404.
- Sugiura, T., et al. 2000. Evidence that 2-arachidonoylglycerol but not N-palmitoylethanolamine or anandamide is the physiological ligand for the cannabinoid receptor ligands in HL-60 cells. J. Biol. Chem. 275: 605-612.
- 7. Fernandez-Ruiz, J., et al. 2000. The endogenous cannabinoid system and brain development. Trends Neurosci. 23: 14-20.
- Valverde, O., et al. 2000. Reduction of stress-induced analgesia but not of exogenous opioid effects in mice lacking CB1 receptors. Eur. J. Neurosci. 12: 533-539.

CHROMOSOMAL LOCATION

Genetic locus: CNR2 (human) mapping to 1p36.11.

SOURCE

CB2 (3C7) is a mouse monoclonal antibody raised against amino acids 302-360 of CB2 of human origin.

PRODUCT

Each vial contains 100 μ g lgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

CB2 (3C7) is recommended for detection of CB2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 CB2 siRNA (h): sc-39912, CB2 shRNA Plasmid (h): sc-39912-SH and CB2 shRNA (h) Lentiviral Particles: sc-39912-V.

Molecular Weight of CB2: 45 kDa.

Positive Control: HL-60 whole cell lysate: sc-2209, Jurkat whole cell lysate: sc-2204 or MOLT-4 cell lysate: sc-2233.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA





CB2 (3C7): sc-293188. Western blot analysis of CB2 expression in HL-60 (\pmb{A}), Jurkat (\pmb{B}), MOLT-4 (\pmb{C}) and IB4 (\pmb{D}) whole cell lysates.

CB2 (3C7): sc-293188. Western blot analysis of CB2 expression in non-transfected $({\bf A})$ and CB2 transfected $({\bf B})$ 293T whole cell lysates.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.