SANTA CRUZ BIOTECHNOLOGY, INC.

CB2 (S-16): sc-10071

SANTA CRUZ BIOTECHNOLOGY

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 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

1. Matsuda, L.A., et al. 1990. Structure of a cannabinoid receptor and functional expression of the cloned cDNA. Nature 346: 561-564.
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.
3. Munro, S., et al. 1993. Molecular characterization of a peripheral receptor for cannabinoids. Nature 365: 61-65.

CHROMOSOMAL LOCATION

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

SOURCE

CB2 (S-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of CB2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-10071 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CB2 (S-16) 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 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 Controls: COLO 205 whole cell lysate: sc-364177.

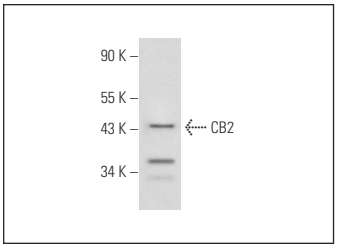
STORAGE

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

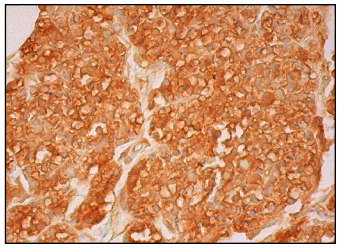
RESEARCH USE

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

DATA



CB2 (S-16): sc-10071. Western blot analysis of CB2 expression in COLO 205 whole cell lysate.



CB2 (S-16): sc-10071. Immunoperoxidase staining of formalin fixed, paraffin-embedded human parathyroid gland tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Nakajima, Y., et al. 2006. Endocannabinoid, anandamide in gingival tissue regulates the periodontal inflammation through NFκB pathway inhibition. FEBS Lett. 580: 613-619.
2. Ashton, J.C., et al. 2007. Cerebral hypoxia-ischemia and middle cerebral artery occlusion induce expression of the cannabinoid CB2 receptor in the brain. Neurosci. Lett. 412: 114-117.
3. Anand, U., et al. 2008. Cannabinoid receptor CB2 localisation and agonist-mediated inhibition of capsaicin responses in human sensory neurons. Pain 138: 667-680.
4. Giuliano, M., et al. 2009. Apoptosis induced in Hep G2 cells by the synthetic cannabinoid WIN: involvement of the transcription factor PPARγ. Biochimie 91: 457-465.
5. Garcia-Gonzalez, E., et al. 2009. Cannabinoids inhibit fibrogenesis in diffuse systemic sclerosis fibroblasts. Rheumatology 48: 1050-1056.

PROTOCOLS

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