SANTA CRUZ BIOTECHNOLOGY, INC.

CRF (S-19): sc-1761

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Individuals suffering from Alzheimer's disease (AD) exhibit dramatic reductions in the content of corticotropin-releasing factor (CRF), increased expression of CRF receptors (CRFRs) and abnormalities in neuronal morphology in affected brain areas. In addition, AD patients show decreased concentrations of CRF in their cerebrospinal fluid, which may contribute to their cognitive impairment. A high affinity CRF binding protein, designated CRF-BP, has been discovered in post-mortem brain samples from AD patients. CRF-BP serves to bind and inactivate CRF, reducing the pool of "free CRF" available to bind CRFRs. Two CRFRs, designated CRF-RI and CFR-RII, have been described and exhibit distinct brain localizations. There are two forms of CFR-RII, referred to as CFR-RII α and CFR-RII β, that result from alternative mRNA splicings. An additional member of the CRF family, urocortin, shares 63% sequence identity with urotensin and 45% sequence identity with CRF. Urocortin specifically binds to and activates CRF-RI and CRF-RII, but binds to CRF-RII more efficiently than CRF, suggesting that it may be the true, high affinity ligand for the CRF receptor type II.

CHROMOSOMAL LOCATION

Genetic locus: Crh (mouse) mapping to 3 A2.

SOURCE

CRF (S-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of CRF of rat 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-1761 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

CRF (S-19) is recommended for detection of CRF precursor of mouse and rat 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with the processed active peptide.

Suitable for use as control antibody for CRF siRNA (m): sc-39396, CRF shRNA Plasmid (m): sc-39396-SH and CRF shRNA (m) Lentiviral Particles: sc-39396-V.

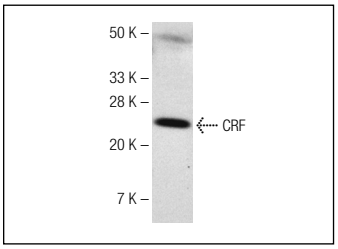
Molecular Weight of CRF: 25 kDa.

Positive Controls: PC-12 + NGF cell lysate: sc-3808, PC-12 cell lysate: sc-2250 or mouse brain extract: sc-2253.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



CRF (S-19): sc-1761. Western blot analysis of CRF expression in NGF-treated PC-12 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Preil, J., et al. 2001. Regulation of the hypothalamic-pituitary-adrenocortical system in mice deficient for CRH receptors 1 and 2. Endocrinology 142: 4946-4955.
2. Wei, R., et al. 2002. Specific up-regulation of CRH or AVP secretion by acetylcholine or lipopolysaccharide in inflammatory susceptible Lewis rat fetal hypothalamic cells. J. Neuroimmunol. 131: 31-40.
3. Barreau, F., et al. 2007. Pathways involved in gut mucosal barrier dysfunction induced in adult rats by maternal deprivation: corticotrophin-releasing factor and nerve growth factor interplay. J. Physiol. 580: 347-356.
4. Zmijewski, M.A., et al. 2007. Expression of molecular equivalent of hypothalamic-pituitary-adrenal axis in adult retinal pigment epithelium. J. Endocrinol. 193: 157-169.
5. Matsuwaki, T., et al. 2010. Functional hypothalamic amenorrhea due to increased CRH tone in melanocortin receptor 2-deficient mice. Endocrinology 151: 5489-5496.
6. Cheng, Y., et al. 2011. Leucine deprivation stimulates fat loss via increasing CRH expression in the hypothalamus and activating the sympathetic nervous system. Mol. Endocrinol. 25: 1624-1635.

RESEARCH USE

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