

CRF-RI/II (C-20): sc-1757

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 postmortem brain samples from AD patients. CRF-BP serves to bind and inactivate CRF, reducing the pool of "free CRF" available to bind CRFRs. Two CRF receptors, designated CRF-RI and CRF-RII, exhibit distinct brain localizations. Two forms of CRF-RII, designated CRF-RII α and CRF-RII β , result from alternative mRNA splicing. Urocortin, an additional member of the CRF family, 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: CRHR1 (human) mapping to 17q21.31, CRHR2 (human) mapping to 7p14.3; Crhr1 (mouse) mapping to 11 E1, Crhr2 (mouse) mapping to 6 B3.

SOURCE

CRF-RI/II (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of CRF-RI of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-1757 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CRF-RI/II (C-20) is recommended for detection of CRF-RI and CRF-RII of mouse, rat and 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).

CRF-RI/II (C-20) is also recommended for detection of CRF-RI and CRF-RII in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of CRF-RI/II: 53-66 kDa.

Positive Controls: BC₃H1 cell lysate: sc-2299, mouse intestine extract or U-87 MG cell lysate: sc-2411.

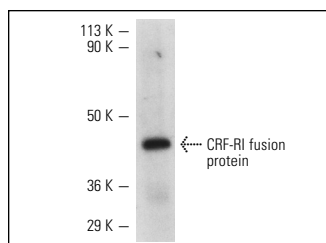
STORAGE

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

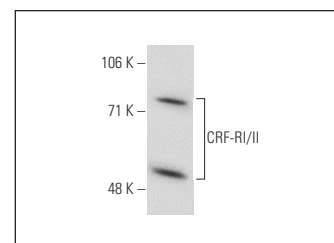
RESEARCH USE

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

DATA



CRF-RI/II (C-20): sc-1757. Western blot analysis of human recombinant CRF-RI fusion protein.



CRF-RI/II (C-20): sc-1757. Western blot analysis of CRF-RI/II expression in BC₃H1 whole cell lysate.

SELECT PRODUCT CITATIONS

- Chen, Y., et al. 2000. Immunocytochemical distribution of corticotropin-releasing hormone receptor type-1 (CRF(1))-like immunoreactivity in the mouse brain: light microscopy analysis using an antibody directed against the C-terminus. *J. Comp. Neurol.* 420: 305-323.
- Sehringer, B., et al. 2000. Formation of proinflammatory cytokines in human term myometrium is stimulated by lipopolysaccharide but not by corticotropin-releasing hormone. *J. Clin. Endocrinol. Metab.* 85: 4859-4865.
- Mikhailova, M.V., et al. 2007. Heterooligomerization between vasotocin and corticotropin-releasing hormone (CRH) receptors augments CRH-stimulated 3',5'-cyclic adenosine monophosphate production. *Mol. Endocrinol.* 21: 2178-2188.
- Candelario-Jalil, E., et al. 2007. Resveratrol potently reduces prostaglandin E2 production and free radical formation in lipopolysaccharide-activated primary rat microglia. *J. Neuroinflammation* 4: 25.
- Tian, J.B., et al. 2008. Stimulation of the inferior olivary complex alters the distribution of the type 1 corticotropin releasing factor receptor in the adult rat cerebellar cortex. *Neuroscience* 153: 308-317.
- Sandi, C., et al. 2008. Chronic stress-induced alterations in amygdala responsiveness and behavior—modulation by trait anxiety and corticotropin-releasing factor systems. *Eur. J. Neurosci.* 28: 1836-1848.
- Tsumoto, K. and Yoshimura, T. 2009. Recombinant proteoliposomes prepared using baculovirus expression systems. *Meth. Enzymol.* 465: 95-109.
- Lukkes, J.L., et al. 2011. Topographical distribution of corticotropin-releasing factor type 2 receptor-like immunoreactivity in the rat dorsal raphe nucleus: co-localization with tryptophan hydroxylase. *Neuroscience* 183: 47-63.
- Williams, T.J., et al. 2011. Ovarian hormones influence corticotropin releasing factor receptor colocalization with delta opioid receptors in CA1 pyramidal cell dendrites. *Exp. Neurol.* 230: 186-196.
- Chang, J., et al. 2011. Urocortin 1 modulates immunosignaling in a rat model of colitis via corticotropin-releasing factor receptor 2. *Am. J. Physiol. Gastrointest. Liver Physiol.* 300: G884-G894.