

CRF (N-20): sc-21675

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 CRF-RII, have been described and exhibit distinct brain localizations. There are two forms of CRF-RII, referred to as CRF-RII α and CRF-RII β , that result from alternative mRNA splicings. An additional member of the CRF family, urocortin, shares 63% 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.

REFERENCES

- Behan, D.P., et al. 1995. Displacement of corticotropin releasing factor from its binding protein as a possible treatment for Alzheimer's disease. *Nature* 378: 284-287.
- Behan, D.P., et al. 1995. Corticotropin releasing factor binding protein (CRF-BP) is expressed in neuronal and astrocytic cells. *Brain Res.* 698: 259-264.
- Behan, D.P., et al. 1995. Corticotropin releasing factor (CRF) binding protein: a novel regulator of CRF and related peptides. *Front. Neuroendocrinol.* 16: 362-382.
- Chalmers, D.T., et al. 1995. Localization of novel corticotropin-releasing factor receptor (CRF2) mRNA expression to specific subcortical nuclei in rat brain: comparison with CRF1 receptor mRNA expression. *J. Neurosci.* 15: 6340-6350.
- Lovenberg, T.W., et al. 1995. CRF2 α and CRF2 β receptor mRNAs are differentially distributed between the rat central nervous system and peripheral tissues. *Endocrinology* 136: 4139-4142.

CHROMOSOMAL LOCATION

Genetic locus: CRH (human) mapping to 8q13.1; Crh (mouse) mapping to 3 A2.

SOURCE

CRF (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of processed active peptide corticotropin 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-21675 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CRF (N-20) is recommended for detection of CRF 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).

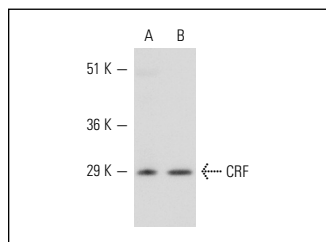
CRF (N-20) is also recommended for detection of CRF in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for CRF siRNA (h): sc-39395, CRF siRNA (m): sc-39396, CRF shRNA Plasmid (h): sc-39395-SH, CRF shRNA Plasmid (m): sc-39396-SH, CRF shRNA (h) Lentiviral Particles: sc-39395-V and CRF shRNA (m) Lentiviral Particles: sc-39396-V.

Molecular Weight of CRF: 25 kDa.

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

DATA



CRF (N-20): sc-21675. Western blot analysis of CRF expression in untreated (A) and NGF treated (B) PC-12 whole cell lysates.

SELECT PRODUCT CITATIONS

- Kubo, Y., et al. 2010. Urocortin prevents indomethacin-induced small intestinal lesions in rats through activation of CRF2 receptors. *Dig. Dis. Sci.* 55: 1570-1580.

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.

MONOS
Satisfaction
Guaranteed

Try **CRF (2B11): sc-293187**, our highly recommended monoclonal alternative to CRF (N-20).