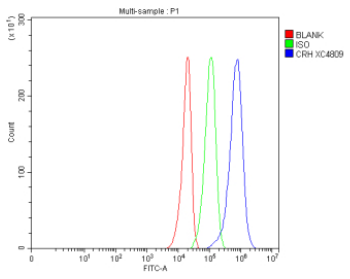
CRH Antibody / Corticotropin Releasing Hormone (FY13226)

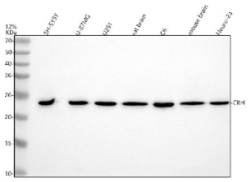
Catalog No.	Formulation	Size
FY13226	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	P06850
Applications	Western Blot: 0.25-0.5ug/ml Flow cytometry: 1-3ug/million cells
Limitations	This CRH antibody is available for research use only.



Flow Cytometry analysis of U251 cells using anti-CRH antibody. Overlay histogram showing U251 cells stained with (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-CRH antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



Western blot analysis of CRF/CRH using anti-CRH antibody. Lane 1: human SH-SY5Y whole cell lysates, Lane 2: human U-87MG whole cell lysates, Lane 3: human U251 whole cell lysates, Lane 4: rat brain tissue lysates, Lane 5: rat C6 whole cell lysates, Lane 6: mouse brain tissue lysates, Lane 7: mouse Neuro-2a whole cell lysates, After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-CRH antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. Western blot detection of CRH shows a single band at ~24-25 kDa across samples. Although the precursor is ~21 kDa, CRH commonly migrates slightly larger on SDS-PAGE, consistent with glycosylation and prohormone processing.

Description

CRH antibody detects Corticotropin releasing hormone, a neuropeptide hormone that regulates the hypothalamic-pituitary-adrenal (HPA) axis and stress response. The UniProt recommended name is Corticotropin releasing hormone (CRH). This 41-amino-acid peptide is synthesized in the hypothalamus and secreted into the hypophyseal portal circulation, where it stimulates adrenocorticotropic hormone (ACTH) release from the anterior pituitary.

Functionally, CRH antibody identifies the peptide precursor prepro-CRH, which undergoes proteolytic cleavage to produce the mature active hormone. CRH binds to G protein-coupled receptors CRHR1 and CRHR2 on pituitary corticotrophs, activating adenylate cyclase and cAMP-dependent signaling pathways that induce ACTH synthesis and secretion. ACTH in turn stimulates cortisol release from the adrenal cortex, completing the neuroendocrine feedback loop that maintains stress adaptation and homeostasis.

The CRH gene is located on chromosome 8q13.1 and is primarily expressed in the paraventricular nucleus of the hypothalamus, but also in peripheral tissues such as the placenta, adrenal glands, and gastrointestinal tract. CRH coordinates endocrine, autonomic, and behavioral responses to stress, linking neuroendocrine signaling with emotional and metabolic regulation.

Pathologically, dysregulated CRH expression is associated with anxiety, depression, CushingÃ¯Â¿Â½s syndrome, and inflammatory disorders. Overproduction of CRH leads to chronic activation of the HPA axis and elevated cortisol levels, while deficiency impairs stress response and adrenal function. Research using CRH antibody supports studies in neuroendocrinology, stress physiology, and behavioral neuroscience.

CRH antibody is validated for immunohistochemistry, ELISA, and immunofluorescence to detect neuropeptides and hormones. NSJ Bioreagents provides CRH antibody reagents optimized for research in endocrine signaling, stress regulation, and hypothalamic function.

Structurally, Corticotropin releasing hormone is a 41-residue peptide containing a disulfide bond that stabilizes its helical structure, essential for receptor binding and biological activity. Its precursor includes a signal peptide directing secretion and prohormone regions involved in processing. This antibody enables investigation of CRH's role in HPA axis regulation, neuropeptide signaling, and stress-related disorders.

Application Notes

Optimal dilution of the CRH antibody should be determined by the researcher.

Immunogen

A synthetic peptide corresponding to a sequence at the C-terminus of human CRF/CRH was used as the immunogen for the CRH antibody.

Storage

After reconstitution, the CRH antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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