CRF, bovine

Cat. No.:	HY-P1533
CAS No.:	92307-52-3
Molecular Formula:	$C_{206}H_{340}N_{60}O_{63}S$
Molecular Weight:	4697.34
Sequence:	Ser-Gln-Glu-Pro-Pro-Ile-Ser-Leu-Asp-Leu-Thr-Phe-His-Leu-Leu-Arg-Glu-Val-Leu-Glu-Met-Thr-Lys-Ala-Asp-Gln-Leu-Ala-Gln-Gln-Ala-His-Asn-Asn-Arg-Lys-Leu-Leu-Asp-Ile-Ala-NH2
Sequence Shortening:	SQEPPISLDLTFHLLREVLEMTKADQLAQQAHNNRKLLDIA-NH2
Target:	CRFR
Pathway:	GPCR/G Protein
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	CRF, bovine is a potent agonist of CRF receptor, and displaces [^{125}I-Tyr]ovine CRF with a K_i of 3.52 nM.
IC_{50} & Target	Ki: 3.52 nM (CRF receptor)[1]
In Vitro	CRF, bovine is a potent agonist of CRF receptor, and displaces [^{125}I-Tyr]ovine CRF with a K_i of 3.52 nM[1]. CRF shows pEC_{50}s of 11.16, 8.53 and 8.70 for human CRF_1, human CRF_2 and rat $CRF_{2\alpha}$[2]. CRF is released from hypothalamic-pituitary-adrenal (HPA) axis induced by stress, and leads to production of glucocorticoids which down regulate immune responses. CRF also has proinflammatory effects. CRF affects brain microvessel endothelial cells (BMEC) structure or function, CRF (100 nM) significantly increases cAMP in BMEC[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay [3]	CRF (1 μM) is added to the cell cultures that are further incubated for 5, 15 and 30 min at 37°C. Control cells are incubated with medium only. Following incubation time, cells are lysed directly on the growth dish using the detergent provided by the cAMP enzyme immunoassay kit. Following trypan blue staining to ensure complete lysis, the cell lysate is collected and assayed for cAMP. In some cases, the brain microvessel endothelial cells (BMEC) are treated with forskolin or pretreated either with the CRFR antagonist Antalarmin (1 μM) or the ATP analogue 2′5′-deoxyadenosine for 5 min at 37°C[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Hogg JE, et al. The human neuroblastoma cell line, IMR-32, expresses functional corticotropin-releasing factor receptors. Eur J Pharmacol. 1996 Sep 26;312(2):257-61.

[2]. Smart D, et al. Characterisation using microphysiometry of CRF receptor pharmacology. Eur J Pharmacol. 1999 Aug 27;379(2-3):229-35.

[3]. Esposito P, et al. Corticotropin-releasing factor (CRF) can directly affect brain microvessel endothelial cells. Brain Res. 2003 Apr 11;968(2):192-8.

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