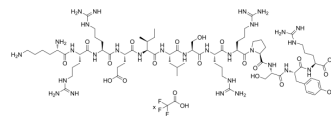


CREBtide TFA

Cat. No.:	HY-P1595A
Molecular Formula:	$C_{73}H_{129}N_{29}O_{19} \cdot xC_2HF_3O_2$
Sequence:	Lys-Arg-Arg-Glu-Ile-Leu-Ser-Arg-Arg-Pro-Ser-Tyr-Arg
Sequence Shortening:	KRREILSRRPSYR
Target:	PKA
Pathway:	Stem Cell/Wnt; TGF-beta/Smad
Storage:	Sealed storage, away from moisture
	Powder -80°C 2 years
	-20°C 1 year
	* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



BIOLOGICAL ACTIVITY

Description	CREBtide TFA is a CREB (cAMP response element binding protein)-like peptide. CREBtide TFA a synthetic 13 amino acid peptide, has been reported as a PKA substrate ^{[1][2][3]} .
In Vitro	delta-CREB is a spliced variant of cAMP response element binding protein (CREB). CREBtide (KRREILSRRPSYR), a synthetic peptide based on the phosphorylation sequence in delta-CREB. delta-CREB and CREBtide are tested as substrates of cAMP-dependent protein kinase (cAK). The apparent K_m of CREBtide phosphorylation by cAK is 3.9 μM , which is 10-fold lower than that of Kemptide ($K_m=39 \mu M$), the synthetic peptide substrate most often employed for cAK measurement. The V_{max} values are 12.4 $\mu mol/(min \cdot mg)$ for CREBtide and 9.8 $\mu mol/(min \cdot mg)$ for Kemptide. The apparent K_m of CREBtide phosphorylation by cGMP-dependent protein kinase (cGK) is 2.9 μM and the V_{max} value is 3.2 $\mu mol/(min \cdot mg)$. Both delta-CREB and CREBtide are phosphorylated at a much slower rate by cGK as compared with cAK, implying that the high cAK/cGK specificity exhibits by delta-CREB is retained by the peptide ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Wu J, et al. A microPLC-based approach for determining kinase-substrate specificity. *Assay Drug Dev Technol.* 2007 Aug;5(4):559-66.
- [2]. Colbran JL, et al. cAMP-dependent protein kinase, but not the cGMP-dependent enzyme, rapidly phosphorylates delta-CREB, and a synthetic delta-CREB peptide. *Biochem Cell Biol.* 1992 Oct-Nov;70(10-11):1277-82.
- [3]. Harum KH, et al. Cognitive impairment in Coffin-Lowry syndrome correlates with reduced RSK2 activation. *Neurology.* 2001 Jan 23;56(2):207-14.

Caution: Product has not been fully validated for medical applications. For research use only.

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