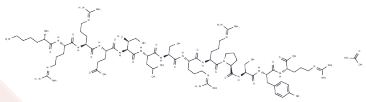
Data Sheet (Cat.No.TP1876L)

TargetMol

CREBtide acetate(149155-45-3 free base)

Chemical Properties



CAS No. :

Formula: C75H133N29O21

Molecular Weight: 1777.07

Storage: Keep away from moisture
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	CREBtide acetate is a synthetic substrate for PKA (Km=3.9 μM), which is based on the phosphorylation sequence in d-CREB (cAMP response element binding protein).
Targets(IC50)	PKA
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 Km of CREBtide phosphorylation by cAK is 3.9 μM, which is 10-fold lower than that of Kemptide (Km=39 μM), the synthetic peptide substrate most often employed for cAK measurement. The Vmax values are 12.4 mumol/(min.mg) for CREBtide and 9.8 mumol/(min.mg) for Kemptide. The apparent Km of CREBtide phosphorylation by cGMP-dependent protein kinase (cGK) is 2.9 μM and the Vmax value is 3.2 mumol/(min.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].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.5627 mL	2.8136 mL	5.6272 mL
5 mM	0.1125 mL	0.5627 mL	1.1254 mL
10 mM	0.0563 mL	0.2814 mL	0.5627 mL
50 mM	0.0113 mL	0.0563 mL	0.1125 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Wu J, et al. A microPLC-based approach for determining kinase-substrate specificity. Assay Drug Dev Technol. 2007 Aug;5(4):559-66.

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