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产品名称：
PHE-THR-ASP-ASN-TYR-THR-ARG-LEU-ARG-LYS-GLN-MET-ALA-VAL-LYS-LYS-TYR-LEU-ASN-SER-ILE-LEU-ASN-NH2
产品别名：VIP(6-28)(human, rat, porcine, bovine)

生物活性：

Description	VIP(6-28)(human, rat, porcine, bovine) is an effective antagonist of the actions of exogenous vasoactive intestinal peptide (VIP) on cAMP.
IC_{50} & Target	VIP[1]
In Vitro	VIP(6-28) is an effective VIP antagonist in the superior cervical ganglion (SCG) , and results obtained using this analog indicate that endogenous VIP can participate in a positive feedback loop in injured sympathetic neurons in which it enhances its own expression. VIP(6-28), when added to short-term cultures of adult SCG at a concentration of 10, 30, or 100 μM, reduces the increase in cAMP levels produced by stimulation with 10 μM VIP by 52, 64, or 81%, respectively. At any of these concentrations tested, VIP(6-28) by itself does not alter cAMP levels. In contrast to its ability to reduce the VIP-stimulated elevation in cAMP levels by 64%, the addition of 30 μM VIP(6-28) to culture medium does not significantly alter cAMP levels measured after stimulation of adult ganglia with either isoproterenol or forskolin (10 μM each). Similar results on the ability of VIP(6-28) to block VIP-stimulated increases in cAMP levels are obtained in neuron-enriched and in non-neuronal cell-enriched dissociated cultures[1].

Solvent&Solubility

In Vitro:

H_2O

Peptide Solubility and Storage Guidelines:

1. Calculate the length of the peptide.
2. Calculate the overall charge of the entire peptide according to the following table:

	Contents	Assign value
Acidic amino acid	Asp (D), Glu (E), and the C-terminal -COOH.	-1
Basic amino acid	Arg (R), Lys (K), His (H), and the N-terminal -NH_2	+1
Neutral amino acid	Gly (G), Ala (A), Leu (L), Ile (I), Val (V), Cys (C), Met (M), Thr (T), Ser (S), Phe (F), Tyr (Y), Trp (W), Pro (P), Asn (N), Gln (Q)	0

3. Recommended solution:

Overall charge of peptide	Details
Negative (<0)	1. Try to dissolve the peptide in water first. 2. If water fails, add NH_4OH (<50 μL). 3. If the peptide still does not dissolve, add DMSO (50-100 μL) to solubilize the peptide.
Positive (>0)	1. Try to dissolve the peptide in water first. 2. If water fails, try dissolving the peptide in a 10%-30% acetic acid solution. 3. If the peptide still does not dissolve, try dissolving the peptide in a small amount of DMSO.

	Zero (=0)	1. Try to dissolve the peptide in organic solvent (acetonitrile, methanol, etc.) first. 2. For very hydrophobic peptides, try dissolving the peptide in a small amount of DMSO, and then dilute the solution with water to the desired concentration.
References	[1]. Mohney RP, et al. Vasoactive intestinal peptide enhances its own expression in sympathetic neurons after injury. J Neurosci. 1998 Jul 15;18(14):5285-93.	
实验参考：		
Kinase Assay	Adult rats are killed by decapitation. The SCGs are removed, desheathed, placed in organ culture, and maintained for 24 or 48 hr in F-12 defined medium equilibrated with 95% O2 and 5% CO2. Some ganglia are preincubated for 30 min in medium containing the VIP receptor antagonist VIP(6-28), and then transferred for 24 hr to medium containing both VIP(6-28) and an agonist. In experiments in which cAMP is to be measured, ganglia are removed from animals and preincubated for 30 min in F-12 medium containing 500 μM IBMX to prevent the metabolism of cAMP. Ganglia are then incubated for an additional 30 min in F-12 medium with IBMX and the compound to be studied. When the action of VIP(6-28) is examined, it is added to the medium during the last 5 min of the preincubation and throughout the incubation. Ascorbic acid (0.2 mg/mL) is added to cultures containing isoproterenol to retard oxidation of the catecholamine. No significant differences in peptide levels are detected between ganglia maintained in F-12 alone and those cultured in medium containing ascorbic acid[1].	
References	[1]. Mohney RP, et al. Vasoactive intestinal peptide enhances its own expression in sympathetic neurons after injury. J Neurosci. 1998 Jul 15;18(14):5285-93.	