VIP(6-28)(human, rat, porcine, bovine)

Cat. No.:	HY-P1023
CAS No.:	69698-54-0
Molecular Formula:	$C_{126}H_{207}N_{37}O_{34}S$
Molecular Weight:	2816.28
Sequence:	Phe-Thr-Asp-Asn-Tyr-Thr-Arg-Leu-Arg-Lys-Gln-Met-Ala-Val-Lys-Lys-Tyr-Leu-Asn-Ser-Ile-Leu-Asn-NH2
Sequence Shortening:	FTDNYTRLRKQMAVKKYLNSILN-NH2
Target:	Others
Pathway:	Others
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	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]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Kinase Assay [1]	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].

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CUSTOMER VALIDATION

- Cell Metab. 2022 Nov 11;S1550-4131(22)00490-9.

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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.

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