

Delta (Phospho) Sleep Inducing Peptide

Cat. No.:	HY-P3819
CAS No.:	70754-23-3
Molecular Formula:	C ₃₅ H ₄₉ N ₁₀ O ₁₈ P
Molecular Weight:	928.79
Sequence:	Trp-Ala-Gly-Gly-Asp-Ala-{Ser(PO ₃ H ₂)}-Gly-Glu
Sequence Shortening:	WAGGDA-{Ser(PO ₃ H ₂)}-GE
Target:	Others
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	Delta (Phospho) Sleep Inducing Peptide (DSIP-P) is a long-lasting sleep-promoting peptide. Delta (Phospho) Sleep Inducing Peptide induces changes in the circadian locomotor behavior in rats ^{[1][2][3]} .	
In Vitro	Delta (Phospho) Sleep Inducing Peptide (20-300 nM) increases rat pineal N-acetyltransferase (NAT) activity induced by norepinephrine in vitro ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
In Vivo	Delta (Phospho) Sleep Inducing Peptide (0.1 nmol/kg; i.v.; once daily for 4 times) induces changes in the circadian locomotor behavior ^[1] . Delta (Phospho) Sleep Inducing Peptide (20 or 200 pmol/kg; inject into the 3rd cerebroventricle of male rats immediately before the onset of the dark period) increases slow-wave sleep and paradoxical sleep during the subsequent dark period without shortening sleep latency at a dose of 200 pmol/kg ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	Animal Model:	Female rats from own inbred strain (KBS/K60) ^[1]
	Dosage:	0.1 nmol/kg
	Administration:	Intravenous injection; once daily for 4 consecutive days
	Result:	Induced rapid and mark changes in the circadian locomotor behavior when during the light (sleeping) phase testing animals became relatively more active.

REFERENCES

- [1]. Graf M, et al. Effects of repeated DSIP and DSIP-P administration on the circadian locomotor activity of rats. Pharmacol Biochem Behav. 1981 Nov;15(5):717-21.
- [2]. Nakagaki K, et al. Sleep-promoting effect following intracerebroventricular injection of a phosphorylated analogue of delta sleep-inducing peptide (DSIP-P) in rats. Neurosci Lett. 1988 Aug 31;91(2):160-4.

[3]. Graf MV, Schoenenberger GA. Delta sleep-inducing peptide modulates the stimulation of rat pineal N-acetyltransferase activity by involving the alpha 1-adrenergic receptor. J Neurochem. 1987 Apr;48(4):1252-7.

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

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