Myomodulin

Cat. No.:	HY-P0268
CAS No.:	110570-93-9
Molecular Formula:	$C_{36}H_{67}N_{11}O_8S_2$
Molecular Weight:	846.12
Sequence:	Pro-Met-Ser-Met-Leu-Arg-Leu-NH2
Sequence Shortening:	PMSMLRL-NH2
Target:	Calcium Channel; Potassium Channel; Sodium Channel
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	Myomodulin is a neuropeptide present in molluscs, insects, and gastropods.
In Vitro	Myomodulin decreases period and increases spike frequency in oscillator heart interneurons. Myomodulin enhances the hyperpolarization-activated cation current and inhibits the electrogenic Na/K pump[1]. A myomodulin peptide has been suggested to mediate the response of the giant glial cells to stimulation of the Leydig interneuron in the central nervous system of the leech Hirudo medicinalis. The peptide evokes a membrane outward current (EC_{50} approximately 2 μM), which neither desensitizes nor shows any sign of run-down, and elicits a K^+ conductance increase of the glial cell membrane[2]. Myomodulin modulate ion channels in a wide variety of organisms including Aplysia, Lymnaea, and Pleurobranchaea. Myomodulin differentially modulates the potassium currents and reduces the amplitude of the Ca^{2+} current by 20%[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Tobin AE, et al. Myomodulin increases Ih and inhibits the NA/K pump to modulate bursting in leech heart interneurons. J Neurophysiol. 2005 Dec;94(6):3938-50.

[2]. Britz FC, et al. Membrane responses of the leech giant glial cell to the peptide transmitter myomodulin. Peptides. 2002 Dec;23(12):2117-25.

[3]. Wang Y, et al. Modulatory effects of myomodulin on the excitability and membrane currents in Retzius cells of the leech. J Neurophysiol. 1999 Jul;82(1):216-25.

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

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