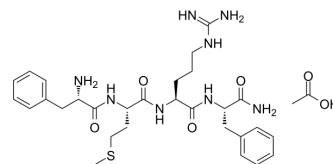


Phe-Met-Arg-Phe, amide acetate

Cat. No.:	HY-P0249B
CAS No.:	152165-14-5
Molecular Formula:	C ₃₁ H ₄₆ N ₈ O ₆ S
Molecular Weight:	658.81
Sequence:	Phe-Met-Arg-Phe-NH ₂
Sequence Shortening:	FMRF-NH ₂
Target:	Potassium Channel
Pathway:	Membrane Transporter/Ion Channel
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Phe-Met-Arg-Phe, amide acetate dose dependently (ED ₅₀ =23 nM) activates a K ⁺ current in the peptidergic caudodorsal neurons ^[1] .
IC₅₀ & Target	ED ₅₀ : 23 nM (K ⁺ current) ^[1]
In Vitro	<p>In the molluscan central nervous system, Phe-Met-Arg-Phe, amide (FMRFa) acetate acts on K⁺ channels in sensory, motor-, and neuroendocrine neurones. Phe-Met-Arg-Phe, amide acetate activates a novel K⁺ current that is characterized by a combined voltage- and receptor-dependent gating mechanism, with both factors being necessary for opening of the channels^[1].</p> <p>Phe-Met-Arg-Phe, amide (1 μM) acetate significantly inhibits glucose stimulated (300 mg/dL) insulin release (p<0.005) and somatostatin release (p<0.01) from the isolated perfused pancreas^[2].</p> <p>Phe-Met-Arg-Phe, amide (FMRF-NH₂) (1 and 10 μM) acetate is without effect on glucagon secretion, either in low glucose (50 mg/dL), high glucose (300 mg/dL), or during arginine stimulation (5 mM)^[2].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>
In Vivo	<p>Phe-Met-Arg-Phe, amide (FMRFamide) acetate stimulates growth hormone secretion in conscious OVX rats. The presence of Phe-Met-Arg-Phe, amide-like immunoreactivity in neuronal elements in the hypothalamus suggested a role for this in the hypothalamic control of the anterior pituitary function. The injection of 200 ng (313.8 pM) of FMRFamide (in 2 μL) produces a significantly increased plasma GH 15 min after injection. The GH-increasing effect of 400-800 ng (627-1255 pM) of FMRFamide is already developed after 5 min and lasted up to 30 min^[3].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

REFERENCES

[1]. Kits KS, et al. Phe-Met-Arg-Phe-amide activates a novel voltage-dependent K⁺ current through a lipoygenase pathway in molluscan neurones. *J Gen Physiol.* 1997 Nov;110(5):611-28.

[2]. Sorenson RL, et al. Phe-met-arg-phe-amide (FMRF-NH₂) inhibits insulin and somatostatin secretion and anti-FMRF-NH₂ sera detects pancreatic polypeptide cells in the rat islet. *Peptides.* 1984 Jul-Aug;5(4):777-82.

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

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