

Phe-Met-Arg-Phe, amide acetate

Chemical Properties

CAS No. :

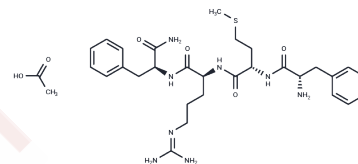
Formula: C31H46N8O6S

Molecular Weight: 658.82

Keep away from moisture

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	Phe-Met-Arg-Phe, amide acetate, activates a K ⁺ current in peptidergic caudodorsal neurons dose-dependently (ED ₅₀ =23 nM) and appears to localize with neuropeptide Y in some brain regions.
Targets(IC50)	Potassium Channel
In vitro	In the molluscan central nervous system, Phe-Met-Arg-Phe, amide (FMRFa) acts on K ⁺ channels in sensory, motor-, and neuroendocrine neurons and activates a novel K ⁺ current characterized by a combined voltage- and receptor-dependent gating mechanism, with both factors necessary for channel opening[1]. At 1 μM, it significantly inhibits glucose-stimulated (300 mg/dL) insulin release (p<0.005) and somatostatin release (p<0.01) from the isolated perfused pancreas. Phe-Met-Arg-Phe, amide (FMRF-NH ₂) (1 and 10 μM) has no effect on glucagon secretion, whether in low glucose (50 mg/dL), high glucose (300 mg/dL), or during arginine stimulation (5 mM)[2].
In vivo	Phe-Met-Arg-Phe amide (FMRFamide) has been identified to stimulate growth hormone secretion in conscious ovariectomized (OVX) rats. Its immunoreactivity within hypothalamic neuronal elements hints at its involvement in regulating anterior pituitary functions. Administration of 200 ng (313.8 picomoles) of FMRFamide in a 2 μL volume significantly elevates plasma growth hormone (GH) levels within 15 minutes post-injection. Moreover, a dose range of 400-800 ng (627-1255 picomoles) of FMRFamide induces a rapid increase in GH levels, observable as early as 5 minutes and persisting for up to 30 minutes.

Solubility Information

Solubility	DMSO: 10 mM, Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.5179 mL	7.5893 mL	15.1787 mL
5 mM	0.3036 mL	1.5179 mL	3.0357 mL
10 mM	0.1518 mL	0.7589 mL	1.5179 mL
50 mM	0.0304 mL	0.1518 mL	0.3036 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

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

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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