Product Data Sheet

Product Name: PGlu-3-methyl-His-Pro-NH2 TFA
Cat. No.: GC38937

Chemical Properties

Cas. No.			
SMILES	CN1C(C[C@H](NC([C@@H](N2)CCC2=O)=O)C(N3[C@@H](CCC3)C(N)=O)=O)=CN=C1.OC(C(F)(F)F)=O		
Formula	$C_{19}H_{25}F_3N_6O_6$	M.Wt	490.43
Solubility	Water: 250 mg/mL (509.76 mM)	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure			

Background

PGlu-3-methyl-His-Pro-NH2 TFA (A-42872 TFA), the modified thyrotropin-releasing hormone (TRH) peptide, enhances binding to pituitary TRH receptors and increases stimulation of thyroid-stimulating hormone (TSH) release from the pituitary. The in vitro permeability of PGlu-3-methyl-His-Pro-NH2 TFA through rat skin is increased in the presence of enhancers Ethanol and Cineole[1][2].

PGlu-3-methyl-His-Pro-NH2 TFA (A-42872 TFA) has a very high affinity for the TRH receptor in the CNS. PGlu-3-methyl-His-Pro-NH2 TFA is more potent in eliciting behavioral effects as well as being more potent in the release of both growth hormone and thyroid stimulating hormone[1].

PGlu-3-methyl-His-Pro-NH2 TFA (A-42872 TFA) (300 μg/kg; i.v.) elicits a 80 % increase in cerebral blood flow. Even a minute dose of PGlu-3-methyl-His-Pro-NH2 TFA (625 ng kg-1) causes an increase in cerebral blood flow[1].The addition of 3% terpene in combination with 47% ethanol increases the penetration of PGlu-3-methyl-His-Pro-NH2 TFA (5 mg/ml; transdermal administration; 30 minutes)[2].Topical application of PGlu-3-methyl-His-Pro-

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NH2 TFA induces an increase in TSH serum concentration from 0.32 ng/ml to 22.9 ng/ml, respectively, after 30 min. The addition of Terpene and Ethanol in combination with TRH or PGlu-3-methyl-His-Pro-NH2 TFA, increases the TSH release to 43 and 48.4 ng/ml, respectively[2]. Animal Model: Male Sprague-Dawley rats (weighing 296-356 g)[2]

[1]. Koskinen LO, et al. Cerebrovascular effects of the TRH analogues pGlu-3-methyl-His-Pro amide and pGlu-Glu-Pro amide: a comparison with TRH. Ups J Med Sci. 2000;105(1):73-83. [2]. Magnusson BM, et al. Biological effects after percutaneous absorption of thyrotropin-releasing hormone and its analogue M-TRH. Peptides. 2001 Jan;22(1):73-9.

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