Nemifitide diTFA

Cat. No.: HY-105077A

CAS No.: 204992-09-6

Molecular Formula: $C_{37}H_{45}F_7N_{10}O_{10}$

Molecular Weight: 922.8

Sequence: {Fluoro-Phe}-{Hyp}-Arg-Gly-Trp-NH2

Sequence Shortening: {Fluoro-Phe}-{Hyp}-RGW-NH2

Target: 5-HT Receptor

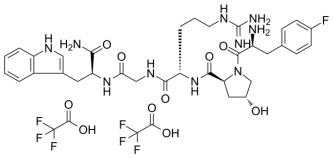
Pathway: GPCR/G Protein; Neuronal Signaling

Storage: Sealed storage, away from moisture and light

Powder -80°C 2 years

-20°C 1 year

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

H_2O : 250 mg/mL (270.91 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.0837 mL	5.4183 mL	10.8366 mL
	5 mM	0.2167 mL	1.0837 mL	2.1673 mL
	10 mM	0.1084 mL	0.5418 mL	1.0837 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Nemifitide diTFA (INN 00835 diTFA) is a synthetic pentapeptide antidepressant with a potential for rapid onset of action[1]. Nemifitide diTFA is a peptide analog of melanocyte-inhibiting factor (MIF)[2]. Nemifitide diTFA can cross the blood-brain barrier[3].

In Vitro

Nemifitide diTFA (INN 00835 diTFA) and its active metabolite (M1) bind at micromolar concentrations to several receptors including the 5-HT_{2A}, 5-HT_{2C}, melanocortin MC4, MC5 and bombesin[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Nemifitide diTFA (INN 00835 diTFA; 0.3 mg/kg; IP; daily; for 14 days) significantly increases swimming in the FSL rats after just 5 days of treatment and has long-lasting effect[2].

Nemifitide diTFA (0.0125-15.0 mg/kg) significantly increases swimming in the FSL rats at both low (0.025-0.3 mg/kg) and high

(3.0-15.0 mg/kg) doses but not at intermediate (0.4-2.4 mg/kg) doses[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male Flinders Sensitive Line (FSL) rat weighing 280-320 g[2]
Dosage:	0.3 mg/kg
Administration:	IP; daily; for 14 days
Result:	Significantly increased swimming in the FSL rats after just 5 days of treatment and had long-lasting effect.

REFERENCES

[1]. Kelly JP, et al. The effect of treatment with a new antidepressant, INN 00835, on platelet serotonin uptake in depressed patients. J Affect Disord. 1999 Oct;55(2-3):231-5.

[2]. Overstreet DH, et al. Antidepressant-like effects of a novel pentapeptide, nemifitide, in an animal model of depression. Psychopharmacology (Berl). 2004 Sep;175(3):303-9.

[3]. Montgomery SA, et al. Efficacy and safety of 30 mg/d and 45 mg/d nemifitide compared to placebo in major depressivedisorder. Int J Neuropsychopharmacol. 2006 Oct;9(5):517-28.

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