Neurokinin A TFA

Cat. No.: HY-P0197A

CAS No.: 2828433-19-6

Molecular Formula: $C_{52}H_{81}N_{14}F_3O_{16}S$

Molecular Weight: 1247.34

HKTDSFVGLM-NH_2 (TFA salt)

Sequence: His-Lys-Thr-Asp-Ser-Phe-Val-Gly-Leu-Met-NH2

Sequence Shortening: HKTDSFVGLM-NH2

Target: Neurokinin Receptor

Pathway: GPCR/G Protein; Neuronal Signaling

Storage: Sealed storage, away from moisture

Powder -80°C 2 years

-20°C 1 year

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

SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (80.17 mM; Need ultrasonic)

H_2O : 50 mg/mL (40.09 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	0.8017 mL	4.0085 mL	8.0171 mL
	5 mM	0.1603 mL	0.8017 mL	1.6034 mL
	10 mM	0.0802 mL	0.4009 mL	0.8017 mL

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

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 25 mg/mL (20.04 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (2.00 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (2.00 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (2.00 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Neurokinin A TFA (Substance K TFA), a peptide neurotransmitter of the tachykinin family, acts via the NK-2 receptor. Neurokinin A acts as a major mediator in human airway and gastrointestinal tissues[1].

In Vitro	Neurokinin A (substance K) is a peptide neurotransmitter of the tachykinin family with potential as a major mediator in human airway and gastrointestinal tissues. Neurokinin A acts via the NK-2 receptor believed to be localized on smooth muscle cells and pharmacologically coupled to a GTP-binding protein. Neurokinin A is a member of a family of peptide neurotransmitters known as tachykinins. These peptides are associated with the central and peripheral nervous systems and display a wide tissue distribution. Tachykinins share the COOH-terminal structure Phe-X-Gly-Leu-Met-NH. The best known members of this family are Substance P and Neurokinin A or Substance K[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Life Sci. 2021 Jan 5;118967.
- Authorea. September 19, 2022.

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REFERENCES

[1]. Gerard NP, et al. The human neurokinin A (substance K) receptor. Molecular cloning of the gene, chromosome localization, and isolation of cDNA from tracheal and gastric tissues. J Biol Chem. 1990 Nov 25;265(33):20455-62.

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