

Substance P TFA

Cat. No.:	HY-P0201A	
CAS No.:	148470-19-3	
Molecular Formula:	C ₆₅ H ₉₉ F ₃ N ₁₈ O ₁₅ S	
Molecular Weight:	1461.67	RPKPQQFFGLM-NH ₂ (TFA salt)
Sequence:	Arg-Pro-Lys-Pro-Gln-Gln-Phe-Phe-Gly-Leu-Met-NH ₂	
Sequence Shortening:	RPKPQQFFGLM-NH ₂	
Target:	Neurokinin Receptor	
Pathway:	GPCR/G Protein; Neuronal Signaling	
Storage:	Powder -80°C 2 years -20°C 1 year In solvent -80°C 6 months -20°C 1 month	

SOLVENT & SOLUBILITY

In Vitro

H₂O : 100 mg/mL (68.41 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
	Concentration				
	1 mM		0.6841 mL	3.4207 mL	6.8415 mL
	5 mM		0.1368 mL	0.6841 mL	1.3683 mL
	10 mM		0.0684 mL	0.3421 mL	0.6841 mL

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

BIOLOGICAL ACTIVITY

Description

Substance P TFA (Neurokinin P TFA) is a neuropeptide, acting as a neurotransmitter and as a neuromodulator in the CNS. The endogenous receptor for substance P is neurokinin 1 receptor (NK1-receptor, NK1R)^[1].

IC₅₀ & Target

Neurokinin 1 receptor^[1]

In Vitro

The neuropeptide substance P (SP) that are mediated by the neurokinin 1 receptor (NK1-R) desensitize and resensitize, which may be associated with NK1-R endocytosis and recycling. SP and the NK1-R are internalized into the same clathrin immunoreactive vesicles, and then sorted into different compartments. SP is intact at the cell surface and in early endosomes, but slowly degraded in perinuclear vesicles. SP induces clathrin-dependent internalization of the NK1-R. The SP/NK1-R complex dissociates in acidified endosomes. SP is degraded, whereas the NK1-R recycles to the cell surface. SP induces internalization of the NK1-R both in transfected epithelial cells^[1].

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

CUSTOMER VALIDATION

- Cell Prolif. 2019 Jan;52(1):e12527.
- Chin J Comp Med. May 2018,Vol. 28. No. 5

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REFERENCES

- [1]. Grady EF, et al. Delineation of the endocytic pathway of substance P and its seven-transmembrane domain NK1 receptor. Mol Biol Cell. 1995 May;6(5):509-24.
- [2]. Zhang L, et al. MiR-34b/c-5p and the neurokinin-1 receptor regulate breast cancer cell proliferation and apoptosis. Cell Prolif. 2018 Oct 17:e12527.
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Caution: Product has not been fully validated for medical applications. For research use only.

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