[D-Pro2,D-Trp7,9] Substance P

Cat. No.:	HY-P3808
CAS No.:	80434-86-2
Molecular Formula:	$C_{74}H_{106}N_{20}O_{13}S$
Molecular Weight:	1515.82
Sequence Shortening:	RPKPQQWFWLM-NH2
Target:	Neurokinin Receptor
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description

[D-Pro2,D-Trp7,9] Substance P, a Substance P (HY-P0201) analogue, is a weak agonist and a potent, specific, competitive Substance P antagonist[1][2].

In Vitro

[D-Pro2,D-Trp7,9] Substance P decreases proliferation only in a few cell lines, and only in the highest concentration (100 μM). [D-Pro2,D-Trp7,9] Substance P displays a significantly weaker antiproliferative action than Aprepitant (HY-10052) on cancer or normal cell lines[3].

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

In Vivo

[D-Pro2,D-Trp7,9] Substance P (0-30 nmol, Intravitreal injection) greatly reduces not only the effects of exogenous Substance P (HY-P0201) but also the inflammatory response to trauma to the eye[1].

[D-Pro2,D-Trp7,9] Substance P specifically antagonizes the contractile effects of Substance P on the guinea-pig isolated taenia coli[2].

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

Animal Model:	Adult pigmented rabbits (1.5-3 kg)[1]
Dosage:	0.03, 0.3, 3, and 30 nmol
Administration:	Intravitreal injection or topical application onto the eye, 60 μL
Result:	Reduced the inflammatory response to Substance P. Dependently reduced the inflammatory response to infrared irradiation. In itself, intravitreal injection of low doses of [D-Pro2, D-Trp7'9]SP had no effects on the eye.

REFERENCES

[1]. Holmdahl G, et al. A substance P antagonist, [D-Pro2, D-Trp7,9]SP, inhibits inflammatory responses in the rabbit eye. Science. 1981 Nov 27;214(4524):1029-31.

[2]. Håkanson R, et al. The mechanism of action of a substance P antagonist (D-Pro2, D-Trp7,9)-SP. Br J Pharmacol. 1982 Dec;77(4):697-700.

[3]. Matalińska J, et al. Antiproliferative effects of [D-Pro2, D-Trp7,9]-Substance P and aprepitant on several cancer cell lines and their selectivity in comparison to normal

cells. Folia Neuropathol. 2020;58(3):237-244. English.

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