# TT-232

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| **Cat. No.:** | HY-105172 |
| **CAS No.:** | 147159-51-1 |
| **Molecular Formula:** | $C_{45}H_{58}N_{10}O_9S_2$ |
| **Molecular Weight:** | 947.13 |
| **Target:** | Somatostatin Receptor |
| **Pathway:** | GPCR/G Protein; Neuronal Signaling |
| **Storage:** | Sealed storage, away from moisture and light, under nitrogen<br>Powder -80°C 2 years<br>-20°C 1 year<br>* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light, under nitrogen) |

## BIOLOGICAL ACTIVITY

**Description**

TT-232 (CAP-232), a somatostatin derivative, is a peptide SSTR1/SSTR4 agonist. TT-232 inhibits cancer cell proliferation and induces apoptosis. TT-232 is also a broad-spectrum anti-inflammatory and analgesic agent[1][2][4].

| **$IC_{50}$ & Target** | SSTR1 | SSTR4 |
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**In Vitro**

TT-232 (10 μg/mL, 48 h) induces apoptosis in human colon (HT-29 and SW620), pancreatic (818), leukemia (K-562), melanoma (WM 938/B, M-1 and EP) and lymphoma (HT-58) tumor cell lines[1].

TT-232 (20-30 μg/mL, 24 h) shows antiproliferative effect on various human tumor cell lines[2].

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

Cell Viability Assay[2]

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| Cell Line: | MCF7, PC-3, P818, K-562, 4-1ST, ect. |
| Concentration: | 20-30 μg/mL |
| Incubation Time: | 24 h |
| Result: | Inhibited cell proliferation by 87%, 90%, 98%, 95%, respectively. |

**In Vivo**

TT-232 (15-750 μg/kg/day, twice a day) inhibits tumor growth in mice transplanted with Colon 26 cell[2].

TT-232 (0.6 or 15 μg/kg s.c or i.p.) shows antitumor effect on P-388 rodent lymphocytic leukemia tumor mice[3].

TT-232 (7.5-20 μg/kg, i.v.) inhibits Carrageenin-induced paw oedema in rats[4].

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

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| Animal Model: | Mice transplanted with Colon 26 cell [2]. |
| Dosage: | 15, 150, 750 μg/kg/day |
| Administration: | Intraperitoneal injection (i.p.) |
| Result: | Reached 70% tumor inhibition at 750 μg/kg. |

## REFERENCES

[1]. Szende B, et al. TT-232: a somatostatin structural derivative as a potent antitumor drug candidate. Anticancer Drugs. 2003 Sep;14(8):585-8.

[2]. Kéri G, et al. A tumor-selective somatostatin analog (TT-232) with strong in vitro and in vivo antitumor activity. Proc Natl Acad Sci U S A. 1996 Oct 29;93(22):12513-8.

[3]. Tejeda M, et al. Growth inhibitory effect of the somatostatin structural derivative (TT-232) on leukemia models. Anticancer Res. 2005 Jan-Feb;25(1A):325-30.

[4]. Pintér E, et al. Pharmacological characterisation of the somatostatin analogue TT-232: effects on neurogenic and non-neurogenic inflammation and neuropathic hyperalgesia. Naunyn Schmiedebergs Arch Pharmacol. 2002 Aug;366(2):142-50.



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