

PRODUCT INFORMATION



[D-Arg¹,D-Phe⁵,D-Trp^{7,9},Leu¹¹]Substance P (trifluoroacetate salt)

Item No. 24829

Formal Name: D-arginyl-L-prolyl-L-lysyl-L-prolyl-D-phenylalanyl-L-glutamyl-D-tryptophyl-L-phenylalanyl-D-tryptophyl-L-leucyl-L-leucinamide, trifluoroacetate salt

Synonyms: D-Phe⁵SP, L-756,867, SPD-D

MF: C₇₉H₁₀₉N₁₉O₁₂ • XCF₃COOH

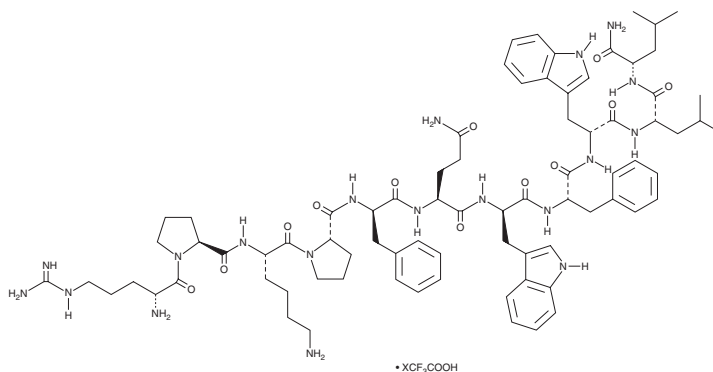
FW: 1,516.8

Purity: ≥95%

Supplied as: A lyophilized powder

Storage: -20°C

Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

[D-Arg¹,D-Phe⁵,D-Trp^{7,9},Leu¹¹]Substance P (SPD-D) (trifluoroacetate salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the SPD-D (trifluoroacetate salt) in water. The solubility of SPD-D (trifluoroacetate salt) in water is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

SPD-D is an analog of substance P (Item No. 24035) and a broad-spectrum neuropeptide antagonist with anticancer activity.¹ It blocks intracellular calcium increases induced by vasopressin, bradykinin (Item No. 15539), gastrin (Item No. 24457), and galanin (Item No. 24456) in H-510 small cell lung carcinoma (SCLC) cells. SPD-D also blocks vasopressin- and bradykinin-induced MAPK signaling in H-510 SCLC cells in a concentration-dependent manner. It inhibits DNA synthesis in a panel of cancer cell lines (IC₅₀s = 20-50 μM) and reduces colony formation of HC12, ICR-SC112, HX149, and NCI-H226 cancer cells *in vitro* (IC₅₀s = 0.5-6.5 μM).² *In vivo*, SPD-D (2.1 μg, s.c.) inhibits tumor growth in HC12 and ICR-SC112 SCLC mouse xenograft models.³

References

1. Seckl, M.J., Higgins, T., Widmer, F., *et al.* [D-Arg¹,D-Trp^{5,7,9},Leu¹¹]substance P: A novel potent inhibitor of signal transduction and growth *in vitro* and *in vivo* in small cell lung cancer cells. *Cancer Res.* **57**(1), 51-54 (1997).
2. Everard, M.J., Macaulay, V.M., Miller, J.L., *et al.* *In vitro* effects of substance P analogue [D-Arg¹, D-Phe⁵, D-Trp^{7,9}, Leu¹¹] substance P on human tumour and normal cell growth. *Br. J. Cancer* **65**(3), 388-392 (1992).
3. Everard, M.J., Macaulay, V.M., Millar, J.L., *et al.* [D-Arg¹, D-Phe⁵, D-Trp^{7,9}, Leu¹¹] substance P inhibits the growth of human small cell lung cancer xenografts *in vivo*. *Eur. J. Cancer* **29A**(10), 1450-1453 (1993).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

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