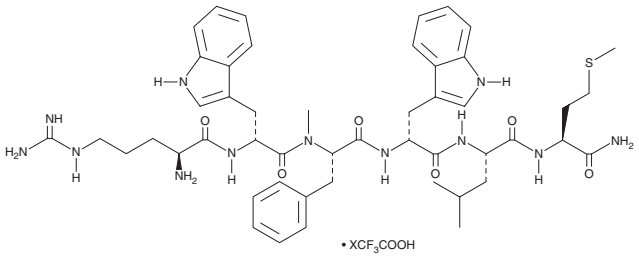
PRODUCT INFORMATION

Antagonist G (trifluoroacetate salt)

Item No. 34425

Formal Name:	L-arginyl-D-tryptophyl-N-methyl-L-phenylalanyl-D-tryptophyl-L-leucyl-L-methioninamide, trifluoroacetate salt
Synonyms:	Arg-D-Trp-N^{me}Phe-D-Trp-Leu-Met-NH_2, [Arg^6,D-Trp^{7,9},N^{me}Phe^8]-substance P (6-11)
MF:	$C_{49}H_{66}N_{12}O_6S \bullet XCF_3COOH$
FW:	951.2
Purity:	≥98%
UV/Vis.:	λ_{max}: 220 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

Antagonist G (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the antagonist G (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. Antagonist G (trifluoroacetate salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of antagonist G (trifluoroacetate salt) in ethanol is approximately 20 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Antagonist G (trifluoroacetate salt) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, antagonist G (trifluoroacetate salt) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Antagonist G (trifluoroacetate salt) has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Antagonist G is a neuropeptide antagonist.[1-3] It inhibits the binding of vasopressin to rat liver or Swiss 3T3 membranes (IC_{50}s = 3.5 and 2.2 µM, respectively) and vasopressin-induced production of inositol phosphate in Swiss 3T3 fibroblasts (IC_{50} = 1 µM).[1] Antagonist G (50 µM) induces apoptosis and the production of reactive oxygen species (ROS) in NCI H69 small cell lung cancer (SCLC) cells.[2] It reduces tumor growth in an NCI H69 mouse xenograft model when administered at a dose of 45 µg/g.[3]

References

1. Seckl, M.J., Newman, R.H., Freemont, P.S., *et al.* Substance P-related antagonists inhibit vasopressin and bombesin but not 5'-3-O-(thio)triphosphate-stimulated inositol phosphate production in swiss 3T3 cells. *J. Cell Physiol.* **163(1)**, 87-95 (1995).
2. MacKinnon, A.C., Waters, C., Rahman, I., *et al.* [Arg^6, D-Trp^{7,9}, N^{me}Phe^8]-substance P (6-11) (antagonist G) induces AP-1 transcription and sensitizes cells to chemotherapy. *Br. J. Cancer.* **83(7)**, 941-948 (2000).
3. Langdon, S., Sethi, T., Ritchie, A., *et al.* Broad spectrum neuropeptide antagonists inhibit the growth of small cell lung cancer in vivo. *Cancer Res.* **52(16)**, 4554-4557 (1992).

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