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SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic



PRODUCT INFORMATION



M40 (trifluoroacetate salt)

Item No. 39726

Formal Name:	glycyl-L-tryptophyl-L-threonyl-L-leucyl-L-asparaginyl-L-seryl-L-alanylglycyl-L-tyrosyl-L-leucyl-L-leucylglycyl-L-prolyl-L-prolyl-L-prolyl-L-alanyl-L-leucyl-L-alanyl-L-leucyl-L-alaninamide, trifluoroacetate salt
Synonym:	Galanin-(1-12)-Pro ₃ -(Ala-Leu) ₂ -Ala amide
Peptide Sequence:	GYTLNSAGYLLGPPPALALA-NH ₂
MF:	C ₉₄ H ₁₄₅ N ₂₃ O ₂₄ • XCF ₃ COOH
FW:	1,981.3
Purity:	≥95%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years

H—Gly—Trp—Thr—Leu—Asn—Ser—Ala—Gly—Tyr—Leu—
Leu—Gly—Pro—Pro—Pro—Ala—Leu—Ala—Leu—Ala—NH₂
• XCF₃COOH

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

Laboratory Procedures

M40 (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the M40 (trifluoroacetate salt) in water. We do not recommend storing the aqueous solution for more than one day.

Description

M40 is a chimeric galanin-derived peptide and galanin-1 (GAL₁) receptor antagonist and GAL₂ receptor agonist (K_is = 2.4 and 4.07 nM, respectively).^{1,2} It is selective for the GAL₁ and GAL₂ receptors over the GAL₃ receptor (K_i = 288 nM).¹ M40 induces inositol phosphate accumulation in CHO cells expressing the human GAL₂ receptor (EC₅₀ = 16.2 nM) and inhibits forskolin-induced cAMP accumulation in RIN-m5F pancreatic β-cells when used at concentrations of 10 or 100 nM.^{1,2} *In vivo*, M40 (9.36 nmol/animal, i.c.v.) reverses galanin-induced inhibition of scopolamine-induced hippocampal acetylcholine (ACh) release in conscious rats.² M40 reduces galanin-induced increases in food intake in rats. It improves cardiac function and decreases cardiac fibrosis in a rat model of heart failure induced by sustained coronary artery ligation when administered at a dose of 30 nmol/kg.³ M40 (20 µg/animal) increases the intromission frequency and ejaculation latency in sexually sluggish male mice.⁴

References

1. Borowsky, B., Walker, M.W., Huang, L.Y., et al. Cloning and characterization of the human galanin GALR2 receptor. *Peptides* **19**(10), 1771-1781 (1998).
2. Bartfai, T., Langel, Ü., Bedecs, K., et al. Galanin-receptor ligand M40 peptide distinguishes between putative galanin-receptor subtypes. *Proc. Natl. Acad. Sci. USA* **90**(23), 11287-11291 (1993).
3. Chen, A., Li, M., Song, L., et al. Effects of the galanin receptor antagonist M40 on cardiac function and remodeling in rats with heart failure. *Cardiovasc. Ther.* **33**(5), 288-293 (2015).
4. Benelli, A., Bertolini, A., Zoli, M., et al. Pharmacological manipulation of brain galaninergic system and sexual behavior in male mice. *Psychopharmacology (Berl)* **160**(3), 325-330 (2002).

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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 - USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM