

PRODUCT INFORMATION



TLQP 21 (trifluoroacetate salt)

Item No. 36864

Formal Name:	L-threonyl-L-leucyl-L-glutamyl-L-prolyl-L-prolyl-L-alanyl-L-seryl-L-seryl-L-arginyl-L-arginyl-L-arginyl-L-histidyl-L-phenylalanyl-L-histidyl-L-histidyl-L-alanyl-L-leucyl-L-prolyl-L-prolyl-L-alanyl-L-arginine, trifluoroacetate salt		
Synonyms:	Neurosecretory Protein VGF (556-576) (mouse, rat), VGF (non-acronymic) (556-576) (mouse, rat)	H—Thr—Leu—Gln—Pro—Pro—Ala—Ser—Ser—Arg—Arg— Arg—His—Phe—His—His—Ala—Leu—Pro—Pro—Ala— Arg—OH	
Peptide Sequence:	TLQPPASSRRRHFHHALPPAR-OH		
MF:	C ₁₀₇ H ₁₇₀ N ₄₀ O ₂₆ • XCF ₃ COOH		• XCF ₃ COOH
FW:	2,432.8		
Purity:	≥95%		
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

TLQP 21 (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the TLQP 21 (trifluoroacetate salt) in water. TLQP 21 (trifluoroacetate salt) is sparingly soluble (1-10 mg/ml) in water. We do not recommend storing the aqueous solution for more than one day.

Description

TLQP 21 is a neuropeptide and fragment of the neurosecretory protein VGF (non-acronymic).¹ It is produced by cleavage of pro-VGF by prohormone convertases. TLQP 21 selectively activates the complement C3a receptor (C3aR; EC₅₀ = 83.6 nM in CHO cells expressing the human receptor) over C5a₁ and C5a₂ at 10 μM and induces phosphorylation of ERK1/2 in primary mouse bone marrow-derived macrophages (BMDMs), which endogenously express C3aR (EC₅₀ = 96.5 nM). It also induces increases in intracellular calcium in primary mouse BMDMs, which can be inhibited by monoclonal antibodies targeting the globular C1q receptor (gC1qR).² Intraplantar hind paw injection of TLQP 21-activated macrophages induces mechanical hypersensitivity in rats. TLQP 21 (25 μg/animal, i.c.v.) decreases food intake and body weight in hamsters.³ It also increases serum luteinizing hormone (LH) levels in pre-pubertal female rats when administered intraperitoneally but not intracerebroventricularly.⁴

References

1. Li, X.X., Lee, J.D., Lee, H.S., *et al.* TLQP-21 is a low potency partial C3aR activator on human primary macrophages. *Front. Immunol.* **14**:1086673, (2023).
2. Chen, Y.-C., Pristerá, A., Ayub, M., *et al.* Identification of a receptor for neuropeptide VGF and its role in neuropathic pain. *J. Biol. Chem.* **288**(48), 34638-34646 (2013).
3. Jethwa, P.H., Warner, A., Nilaweera, K.N., *et al.* VGF-derived peptide, TLQP-21, regulates food intake and body weight in Siberian hamsters. *Endocrinology* **148**(8), 4044-4055 (2007).
4. Aguilar, E., Pineda, R., Gaytán, F., *et al.* Characterization of the reproductive effects of the Vgf-derived peptide TLQP-21 in female rats: In vivo and in vitro studies. *Neuroendocrinology* **98**(1), 38-50 (2013).

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.

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