

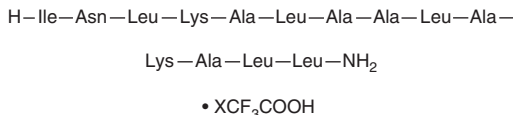
# PRODUCT INFORMATION



## Mastoparan 7 (trifluoroacetate salt)

Item No. 40115

Synonym:	Mas7
Peptide Sequence:	INLKALAALAKALL-NH <sub>2</sub>
MF:	C <sub>67</sub> H <sub>124</sub> N <sub>18</sub> O <sub>15</sub> • XCF <sub>3</sub> COOH
FW:	1,421.8
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

Mastoparan 7 (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the mastoparan 7 (trifluoroacetate salt) in water. We do not recommend storing the aqueous solution for more than one day.

### Description

Mastoparan 7 is a G protein activator and derivative of the mast cell degranulating peptide mastoparan (Item No. 20240).<sup>1</sup> It decreases the affinity of acetylcholine (ACh) to porcine brain muscarinic ACh receptors (mAChRs) when used at a concentration of 30 μM and induces GDP/GTP exchange by G<sub>i</sub> in a concentration-dependent manner. Mastoparan 7 (1 μM) also induces activation of Gα<sub>o</sub> in, and increases dendritic spine density of, primary rat hippocampal neurons.<sup>2</sup> It induces contractions in isolated perfused rat tail arteries (EC<sub>50</sub> = 44.1 nM).<sup>3</sup> Immunization with a vaccine against cocaine in combination with mastoparan 7 as an adjuvant increases hapten-specific serum IgG levels and decreases cocaine-induced locomotion in mice.<sup>4</sup>

### References

1. Higashijima, T., Burnier, J., and Ross, E.M. Regulation of G<sub>i</sub> and G<sub>o</sub> by mastoparan, related amphiphilic peptides, and hydrophobic amines. Mechanism and structural determinants of activity. *J. Biol. Chem.* **265**(24), 14176-14186 (1990).
2. Ramirez, V.T., Ramos-Fernández, E., and Inestrosa, N.C. The Gα<sub>o</sub> activator mastoparan-7 promotes dendritic spine formation in hippocampal neurons. *Neural Plast.* 4258171 (2016).
3. Grześk, G., Malinowski, B., Grześk, E., et al. Direct regulation of vascular smooth muscle contraction by mastoparan-7. *Biomed. Rep.* **2**(1), 34-38 (2014).
4. St. John, A.L., Choi, H.W., Walker, Q.D., et al. Novel mucosal adjuvant, mastoparan-7, improves cocaine vaccine efficacy. *NPJ Vaccines* **5**(1), 12 (2020).

#### 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.

Copyright Cayman Chemical Company, 01/11/2024

#### 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