

PRODUCT INFORMATION



Polybia-MP1 (trifluoroacetate salt)

Item No. 42735

Formal Name: L-isoleucyl-L- α -aspartyl-L-tryptophyl-L-lysyl-L-lysyl-L-leucyl-L-leucyl-L- α -aspartyl-L-alanyl-L-alanyl-L-lysyl-L-glutamyl-L-isoleucyl-L-leucinamide, trifluoroacetate salt

Synonym: Polybia-MPI

Peptide Sequence: IDWKKLLDAAKQIL-NH₂

MF: C₇₈H₁₃₂N₂₀O₁₉ • XCF₃COOH

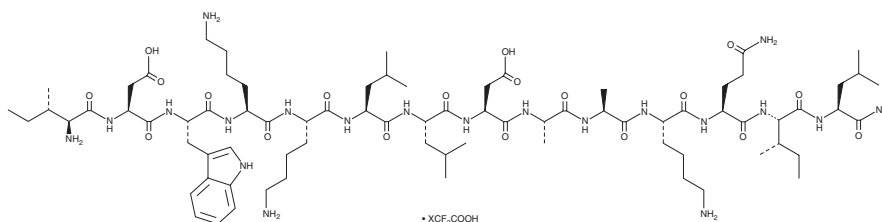
FW: 1,654.0

Purity: ≥98%

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

Polybia-MP1 (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the polybia-MP1 (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. Polybia-MP1 (trifluoroacetate salt) is soluble (≥10 mg/ml) in ethanol and DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of polybia-MP1 (trifluoroacetate salt) can be prepared by directly dissolving the solid in aqueous buffers. Polybia-MP1 (trifluoroacetate salt) is sparingly soluble (1-10 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

Polybia-MP1 is an antimicrobial peptide that has been found in wasp (*P. paulista*) venom.¹ It is active against *E. coli*, *P. aeruginosa*, *B. subtilis*, and *S. aureus* (MICs = 8, 8, 4, and 15 µg/ml, respectively). Polybia-MP1 induces degranulation (EC₅₀ = 45 µM) and lysis of isolated rat peritoneal mast cells but does not induce hemolysis of washed isolated rat erythrocytes. It also induces chemotaxis of polymorphonuclear leukocytes (PMN) in a concentration-dependent manner. Polybia-MP1 (20 µM) induces necrosis in T98G glioblastoma multiforme (GBM) cells.²

References

1. Souza, B.M., Mendes, M.A., Santos, L.D., *et al.* Structural and functional characterization of two novel peptide toxins isolated from the venom of the social wasp *Polybia paulista*. *Peptides* **26**(11), 2157-2167 (2005).
2. da Silva, A.M., Silva-Gonçalves, L.C., Oliveira, F.A., *et al.* Pro-necrotic activity of cationic mastoparan peptides in human glioblastoma multiforme cells via membranolytic action. *Mol. Neurobiol.* **55**(7), 5490-5504 (2018).

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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