

# PRODUCT INFORMATION



## Penetratin (trifluoroacetate salt)

Item No. 36878

**Formal Name:** L-arginyl-L-glutamyl-L-isoleucyl-L-lysyl-L-isoleucyl-L-tryptophyl-L-phenylalanyl-L-glutamyl-L-asparagyl-L-arginyl-L-arginyl-L-methionyl-L-lysyl-L-tryptophyl-L-lysyl-L-lysine, trifluoroacetate salt

**Synonym:** Arg-Gln-Ile-Lys-Ile-Trp-Phe-Gln-Asn-Arg-Arg-Met-Lys-Trp-Lys-Lys-NH<sub>2</sub>

**Peptide Sequence:** RQIKIWFQNRRMKWKK-NH<sub>2</sub>

**MF:** C<sub>104</sub>H<sub>168</sub>N<sub>34</sub>O<sub>20</sub>S • XCF<sub>3</sub>COOH

**FW:** 2,246.8

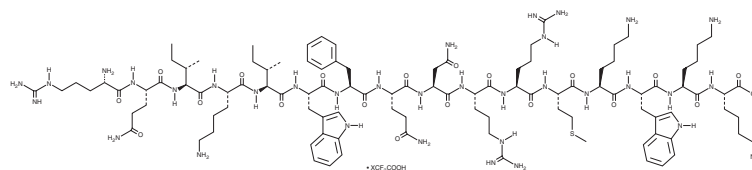
**Purity:** ≥95%

**UV/Vis.:** λ<sub>max</sub>: 219 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

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

### Description

Penetratin is a cell-penetrating peptide.<sup>1</sup> It is composed of 16 amino acids corresponding to amino acids 43-58 of the *Drosophila* Antennapedia homeodomain (AntpHD). Penetratin has been used in the surface functionalization of liposomes for drug delivery across the blood-brain barrier (BBB).<sup>2,3</sup>

### References

1. Dupont, E., Prochiantz, A., and Joliot, A. Penetratin story: An overview. *Cell-penetrating peptides: Methods and protocols*. Langel, Ü., editor, 1<sup>st</sup> edition, Humana (2011).
2. Lamptey, R.N.L., Sun, C., and Singh, J. Brain-targeted delivery of losartan through functionalized liposomal nanoparticles for management of neurogenic hypertension. *Int. J. Pharm.* **637:122841**, (2023).
3. Þorgeirsdóttir, D.Ý., Andersen, J.H., Perch-Nielsen, M., et al. Selenomethionine as alternative label to the fluorophore TAMRA when exploiting cell-penetrating peptides as blood-brain barrier shuttles to better mimic the physicochemical properties of the non-labelled peptides. *Eur. J. Pharm. Sci.* **183:106400**, (2023).

#### 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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#### 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