CARDIOTOXIN

Cytotoxin I · Cardiotoxin gamma

Product No.
MI-CTX-001

CAS No.	UniProt Ref.	Origin
11061-96-4	P01468	Naja pallida

PRODUCT DESCRIPTION

Cardiotoxin (Cytotoxin I / Cardiotoxin gamma) is a 60-amino-acid peptide isolated from Naja pallida venom. The source datasheet describes four disulfide bridges (3-21, 14-38, 42-53 and 54-59) and reports protein kinase C inhibition with an IC50 of 1-3 µM, together with depolarization of skeletal muscle fibres in vitro.

TECHNICAL SPECIFICATIONS

Molecular weight	6,827 g/mol	Purification	HPLC
Solubility	Soluble in water and saline	Purity	>=96% (HPLC)
Toxicity (LD100)	Mice (i.v.): 1.5-1.7 mg/kg	Storage	Freeze-dried: stable; in solution: keep at -20°C

FOR RESEARCH USE ONLY - Not intended for food, diagnostic or therapeutic use.

SELECTED BIBLIOGRAPHIC REFERENCES

1. 2025. The Proteome of African Spitting and Non-Spitting Cobra Venoms and Cytotoxicity Against Pancreatic Cancer Cells. Journal of Applied Toxicology. PMID: 40451193.

2. 2024. Vlasblom R. et al. Distinct cardiotoxic effects by venoms of a spitting cobra (Naja pallida) and a rattlesnake (Crotalus atrox) revealed using an ex vivo Langendorff heart model. Toxicon 240:107637. doi:10.1016/j.toxicon.2024.107637.

3. 2023. High-Throughput Venomics. Journal of Proteome Research. Includes analytical profiling of Naja pallida venom using LC-UV-MS, nanofractionation and proteomics.

4. 2021. Erythrocyte haemotoxicity profiling of snake venom toxins after nanofractionation. Includes Naja pallida and identifies cytotoxic three-finger toxins among major haemolytic toxins.

5. 1993. Chiou S.H. et al. Cobra venom cardiotoxin (cytotoxin) isoforms and neurotoxin: comparative potency of protein kinase C inhibition and cancer cell cytotoxicity and mode of enzyme inhibition. Biochemistry 32(8):2062-2067.