

Huwentoxin-IV TFA

Cat. No.:	HY-P1220A
Molecular Formula:	$C_{174}H_{278}N_{52}O_{51}S_6 \cdot xC_2HF_3O_2$
Sequence:	Glu-Cys-Leu-Glu-Ile-Phe-Lys-Ala-Cys-Asn-Pro-Ser-Asn-Asp-Gln-Cys-Cys-Lys-Ser-Ser-Lys-Leu-Val-Cys-Ser-Arg-Lys-Thr-Arg-Trp-Cys-Lys-Tyr-Gln-Ile-NH ₂ (Disulfide bridge:Cys2-Cys17;Cys9-Cys24;Cys16-Cys31) <small>ECLEIFKACNPSNDQCKSSKLVCSRKTRWCKYQI-NH₂ (Disulfide bridge:Cys₂-Cys₁₇;Cys₉-Cys₂₄;Cys₁₆-Cys₃₁) (TFA salt)</small>
Sequence Shortening:	ECLEIFKACNPSNDQCKSSKLVCSRKTRWCKYQI-NH ₂ (Disulfide bridge:Cys2-Cys17;Cys9-Cys24;Cys16-Cys31)
Target:	Sodium Channel
Pathway:	Membrane Transporter/Ion Channel
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	Huwentoxin-IV TFA is a potent and selective sodium channel blocker, inhibits neuronal Nav1.7, Nav1.2, Nav1.3 and Nav1.4 with IC ₅₀ s of 26, 150, 338 and 400 nM, respectively. Huwentoxin-IV TFA preferentially blocks peripheral nerve subtype Nav1.7 by binding neurotoxin receptor site 4. Huwentoxin-IV TFA has analgesic effects on animal models of inflammatory and neuropathic pain ^{[1][2]} .			
IC₅₀ & Target	Nav1.7 26 nM (IC ₅₀)	Nav1.3 338 nM (IC ₅₀)	Nav1.4 400 nM (IC ₅₀)	Nav1.2 150 nM (IC ₅₀)

REFERENCES

- [1]. Liu Y, et, al. Analgesic effects of Huwentoxin-IV on animal models of inflammatory and neuropathic pain. *Protein Pept Lett.* 2014; 21(2): 153-8.
- [2]. Xiao Y, et, al. Tarantula huwentoxin-IV inhibits neuronal sodium channels by binding to receptor site 4 and trapping the domain ii voltage sensor in the closed configuration. *J Biol Chem.* 2008 Oct 3;283(40):27300-13.

Caution: Product has not been fully validated for medical applications. For research use only.

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