Chlorotoxin

**Product description**

Chlorotoxin (Cltx) is a neurotoxin that was originally isolated from the venom of Leiurus quinquestriatus. Chlorotoxin is a specific ligand of glioma cells. Chlorotoxin binds to Cl− channels (small conductance epithelial chloride channels) in the brain and spinal cord and inhibits Cl− influx. Chlorotoxin most probably acts as a specific blocker, although residues both inside and outside of the pore region of the Cl− channels participate in chlorotoxin binding. It was demonstrated that chlorotoxin inhibits specifically the activity of matrix metalloproteinase-2 (MMP-2) without affecting MMP-1, MMP-3 and MMP-9. MMP-2 are upregulated in glioma cells and related cells making chlorotoxin a promising antitumoral drug and diagnosis tool.

**Product specifications**

- **Disulfide bonds:** Cys2-Cys19, Cys5-Cys28, Cys16-Cys33 and Cys20-Cys35
- **Length (aa):** 36
- **Formula:** C158H249N53O47S11
- **Appearance:** White lyophilized solid
- **Molecular Weight:** 3995.5 Da
- **CAS number:** [163515-35-3]
- **Source:** Synthetic
- **Counterion:** TFA salts
- **Solubility:** Water or saline buffer, 5 mg/mL maximum (recommendation)

**Formulation**

- **Storage/Stability:** Shipped at ambient temperature under lyophilized powder. Store at -20°C (-4°F). Do not freeze-thaw. Aliquot sample if required and store at -80°C (-112°F).
- **Expiry date:** One year
- **Use restrictions:** For laboratory use only. Not for drug, household or other uses. Not for use in diagnostic or therapeutic procedures.

**Related product**

- GaTx1 - #13GTX001: CFTR selective blocker
- GaTx2 - #12GTX002: CIC-2 selective blocker

**References**

- Soroceanu L. Modulation of glioma cell migration and invasion using Cl(−) and K(+) ion channel blockers. J Neurosci.

For laboratory research use only