

Chlorotoxin

产品编号: D50500

CAS: 163515-35-3

保存条件: Store at -20°C.

产品介绍: 基本信息:

CAS: 163515-35-3

分子式: C158H256N52O48S11

分子量: 3995.7

纯度: 97%

级别: BR

序列: MCMPCFTTDHQMARCDDCCGGKGRGKCYGPQCLCR-NH2 (Disulfide bridge: Cys2-Cys19, Cys5-Cys28, Cys16-Cys33, Cys20-Cys35); Met-Cys-Met-Pro-Cys-Phe-Thr-Thr-Asp-His-Gln-Met-Ala-Arg-Lys-Cys-Asp-Asp-Cys-Cys-Gly-Gly-Lys-Gly-Arg-Gly-Lys-Cys-Tyr-Gly-Pro-Gln-Cys-Leu-Cys-Arg-NH2 (Disulfide bridge: Cys2-Cys19, Cys5-Cys28, Cys16-Cys33, Cys20-Cys35);

性状: 乳白色粉末

产品简介:

氯毒素 (Chlorotoxin) 是从雷蛇属以色列蝎子的毒液中提取的由36个氨基酸组成的肽段, 具有抗癌活性。Chlorotoxin是氯离子通道 (chloride channel) 阻断剂。U251MG 细胞迁移抑制剂。

作用靶点: Chloride Channel

作用通路: Membrane Transporter/Ion Channel

体外研究:

Chlorotoxin (Chlorotoxin) preferentially binds to tumor cells and has been harnessed to develop an imaging agent to help visualize tumors during surgical resection. In addition, chlorotoxin has potential as a vehicle to deliver anti-cancer drugs specifically to cancer cells. Chlorotoxin is shown to bind glioma cells, but is unable to bind normal rat astrocytes and Te671, a human rhabdomyosarcoma cell line. Chlorotoxin inhibits the migration of U251MG (glioma) cells, with an IC50 of 600 nM. Chlorotoxin binds to glioma cells is specific and involves high affinity ($K_d=4.2$ nM) and low affinity ($K_d=660$ nM) binding sites. Small conductance chloride channels are shown to be potently blocked by Chlorotoxin. Chlorotoxin has been used as a general pharmacological tool to investigate the function of chloride channels.

体内研究:

Chlorotoxin shows insecticidal activity on insects and other invertebrates. After the

administration of I-Chlorotoxin to tumor-bearing mice, the peptides accumulated within the tumor. Chlorotoxin selectively accumulates in the brain of tumor-bearing mice with calculated brain: muscle ratios of 36.4% of injected dose/g (ID/g), as compared to 12.4% ID/g in control animals.