Product Data Sheet

Kaliotoxin

| Cat. No.: | HY-P1281 | |
|----------------------|--|--|
| CAS No.: | 145199-73-1 | |
| Molecular Formula: | C ₁₇₁ H ₂₈₃ N ₅₅ O ₄₉ S ₈ | |
| Molecular Weight: | 4149.94 | |
| Sequence: | Gly-Val-Glu-Ile-Asn-Val-Lys-Cys-Ser-Gly-Ser-Pro-Gln-Cys-Leu-Lys-Pro-Cys-Lys-Asp-Ala -Gly-Met-Arg-Phe-Gly-Lys-Cys-Met-Asn-Arg-Lys-Cys-His-Cys-Thr-Pro-Lys (Disulfide bri dge: Cys8-Cys28;Cys14-Cys33;Cys18-Cys35) | |
| Sequence Shortening: | GVEINVKCSGSPQCLKPCKDAGMRFGKCMNRKCHCTPK (Disulfide bridge: Cys8-Cys28;Cys14-Cys33;Cys18-Cys35) | |
| Target: | Potassium Channel | |
| Pathway: | Membrane Transporter/Ion Channel | |
| Storage: | Please store the product under the recommended conditions in the Certificate of Analysis. | |

BIOLOGICAL ACTIVITY

| Description | Kaliotoxin is a peptidyl inhibitor of neuronal BK-Type. Kaliotoxin can specific inhibit Kv channels and calcium-activated potassium channels. Kaliotoxin can be used for the research of the regulation of membrane potential and neuron excitability ^{[1][2]} . | | |
|---------------------------|---|---|--|
| IC ₅₀ & Target | Kd: 20 nM (KCa channel) ^[1] | | |
| In Vitro | Kaliotoxin (KTX) (250 nM) specifically suppressed the whole cell Ca2 ⁺ -activated K ⁺ current ^[1] . Kaliotoxin interacts in a one-to-one way with KCa channels with a K _d of 20 nM ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only. | | |
| In Vivo | Kaliotoxin facilitates cognitive processes by the blockage of Kv1.1 or Kv1.3 channels ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only. | | |
| | Animal Model: | Male Sprague–Dawley rats (280–300 g) ^[2] | |
| | Dosage: | 10 ng | |
| | Administration: | Intracerebroventricular injection | |
| | Result: | Improved learning but not information consolidation. Increased the long-term retrieval of an odour-reward association. | |

REFERENCES

[1]. M Crest, et al. Kaliotoxin, a novel peptidyl inhibitor of neuronal BK-type Ca(2+)-activated K+ channels characterized from Androctonus mauretanicus mauretanicus venom. J Biol Chem. 1992 Jan 25;267(3):1640-7.



[2]. S Kourrich, et al. Kaliotoxin, a Kv1.1 and Kv1.3 channel blocker, improves associative learning in rats. Behav Brain Res. 2001 Apr 8;120(1):35-46.

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

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