abcam

Product datasheet

Apamin, blocker of small conductance Ca2+-activated K+ channels ab120268

11 References 2 Images

Overview

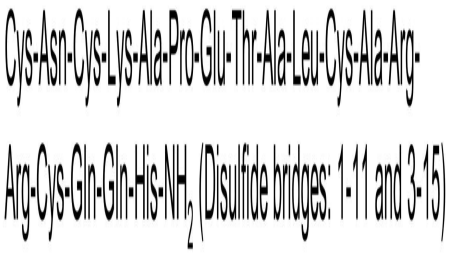
Product name	Apamin, blocker of small conductance Ca2+-activated K+ channels
Description	Blocker of small conductance Ca^{2+}-activated K^+ channels
Biological description	Peptide neurotoxin that naturally occurs in *Apis mellifera* bee venom. Blocks small conductance Ca^{2+} activated K^+ channels (SK). Selective for KCa2.1-2.3 (SK1-3) isoforms. Blocks hSK1, rSK2 and liver rSK3 (IC_{50} values are 8 nM, 83 pM and 0.6 nM, respectively).
CAS Number	24345-16-2
Chemical structure	Cys-Asn-Cys-Lys-Ala-Pro-Glu-Thr-Ala-Leu-Cys-Ala-Arg-Arg-Cys-Gln-Gln-His-NH_2 (Disulfide bridges: 1-11 and 3-15)

Properties

Molecular weight	2027.35
Molecular formula	$C_{79}H_{131}N_{31}O_{24}S_4$
Sequence	CNCKAPETALCARRCQQH (Modifications: C-terminal amide; Disulfide bonds: 1-11, 3-15)
PubChem identifier	16218850
Storage instructions	Store at -20°C. Store under desiccating conditions. The product can be stored for up to 12 months.
Solubility overview	Soluble in water
Handling	Wherever possible, you should prepare and use solutions on the same day. However, if you need to make up stock solutions in advance, we recommend that you store the solution as aliquots in tightly sealed vials at -20°C. Generally, these will be useable for up to one week. Before use, and prior to opening the vial we recommend that you allow your product to equilibrate to room temperature for at least 1 hour. Need more advice on solubility, usage and handling? Please visit our **frequently asked questions (FAQ) page** for more details.
Source	Synthetic

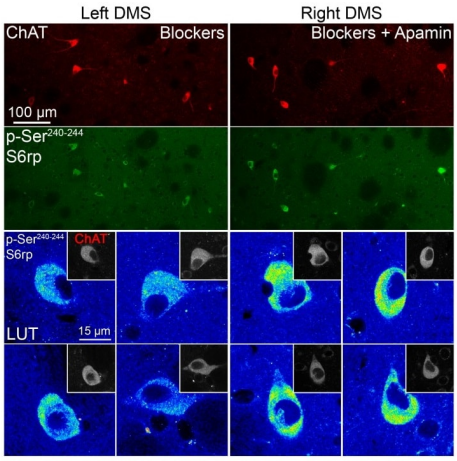
Images

Images



Chemical Structure - Apamin, blocker of small conductance Ca^{2+}-activated K^+ channels (ab120268)

2D chemical structure image of ab120268, Apamin, blocker of small conductance Ca2+-activated K+ channels



Immunohistochemistry - Apamin, blocker of small conductance Ca^{2+}-activated K^+ channels (ab120268)

Confocal images from a transcardially-fixed rat brain previously injected with blockers (left-side dorsal striatum, Left DMS) and blockers plus apamin (right-side dorsal striatum, Right DMS) showing double staining for ChAT and p-Ser240–244-S6rp. Top panels are low-magnification images showing several cholinergic interneurons in the same focal plane. Bottom panels are higher magnification images showing p-S6rp signal intensity in CINs from the left (blockers) and right (blockers + apamin) striata of the same animal. Insets show corresponding ChAT staining.

Bertran-Gonzalez J et al., PloS one., 7(12): e53195. Fig 6B.; doi: 10.1371/journal.pone.0053195

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