Product datasheet

omega-Agatoxin IVA, Ca2+ channel blocker (P and Q type) ab120210

7 References  2 Images

Overview

Product name: omega-Agatoxin IVA, Ca2+ channel blocker (P and Q type)

Description: Ca2+ channel blocker (P and Q type)

Biological description: Synthetic peptide, originally isolated from Agelenopsis aperta spider venom. Selective blocker of CaV2.1 (P/Q type) channels.

CAS Number: 145017-83-0


Properties

Molecular weight: 5202.25

Molecular formula: C217H360N68O60S10

Sequence: KKKCIAKDYGRCKWGTPCCRGRGCISIMGTNECKPRLIMEGLA (Modifications: Disulfide bonds: 4-20, 12-25, 19-36, 27-34)

PubChem identifier: 56841669

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 to 1mg/ml

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.

Refer to SDS for further information

Need more advice on solubility, usage and handling? Please visit our frequently asked questions (FAQ) page for more details.

Source: Synthetic
Many VGCC subtypes contribute to calcium signalling in ganglion cell bodies.

Summary of Ca\(^{2+}\) imaging results in RGC somata showing the following changes in paired pulse Ca\(^{2+}\) signal in response to drugs (applied during the second K\(^+\) pulse) compared to their control paired K\(^+\) pulses (K): 10 µM nifedipine (29\%±7\%; p=0.0003; n=20), 100 µM verapamil (VPM; 39\%±5\%; p<0.0001; n=17), 400 nM \(\omega\)-agatoxin IVA (AGT; 35\%±14\%; p=0.0364; n=9), 3 µM \(\omega\)-conotoxin-GVIA (CTX; 23\%±10\%; p=0.0423; n=15), 3 µM mibefradil (MIB; 21\%±6\%; p=0.0011; n=16) and 200 nM TTX (40\%±9\%; p=0.0004; n=14).

(From Figure 7C of Sargoy et al.)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES, NOT FOR USE IN HUMANS"

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