

Certificate of Analysis

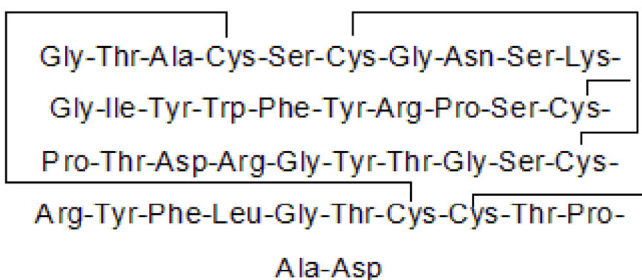
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Product Name: APETx2
CAS Number: 713544-47-9

Catalog No.: 4804 **Batch No.:** 12

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₉₆H₂₈₀N₅₄O₆₁S₆
Batch Molecular Weight: 4561.06
Physical Appearance: White solid
Counter Ion: TFA
Solubility: Soluble to 5 mg/ml in water
Storage: Store at -20°C
Peptide Sequence:



2. ANALYTICAL DATA

HPLC: Shows 97.6% purity
Mass Spectrum: Consistent with structure

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

APETx2 is an acid-sensing ion channel 3 (ASIC3) channel blocker (IC₅₀ values are 63 and 175 nM for homomeric rat and human ASIC3 channels). Also inhibits Na_v1.8 and Na_v1.2 channels (IC₅₀ values are 55 and 114 nM respectively). Demonstrates analgesic properties against acid-induced and inflammatory pain.

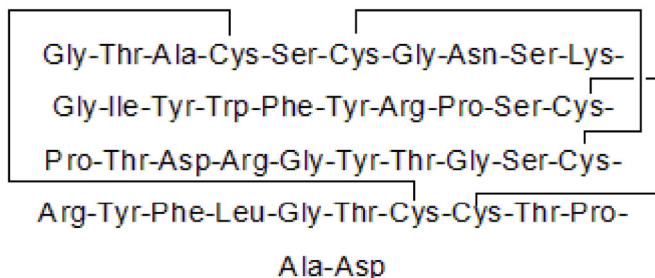
Physical and Chemical Properties:

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Batch Molecular Weight: 4561.06

Physical Appearance: White solid

Peptide Sequence:



Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 5 mg/ml in water

This product is supplied in lyophilized form. It may appear as a solid, gel or film and be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

Counter Ion: TFA

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Peptides in solution are much less stable than in lyophilized form. This is especially true for peptides whose sequences contain amino acids such as Cys, Met, Trp, Asn, Gln, and N-terminal Glu.

Therefore we recommend storing peptides in solution for as short a time as possible. Avoid repeated freeze thaw cycles by dividing the peptide solution into aliquots and storing the aliquots at -20°C. Any portion of an aliquot unused after thawing should be discarded.

Peptides stored in solution can occasionally be susceptible to bacterial degradation. We recommend using sterile solutions or passing the peptide solution through a 0.2 µm filter to remove potential bacterial contamination whenever possible.

References:

Blanchard *et al* (2012) Inhibition of voltage-gated Na(+) currents in sensory neurones by the sea anemone toxin APETx2. *Br.J.Pharmacol.* **165** 2167. PMID: 21943094.

Peigneur *et al* (2012) A natural point mutation changes both target selectivity and mechanism of action of sea anemone toxins. *FASEB J.* **26** 5141. PMID: 22972919.

Karczewski *et al* (2010) Reversal of acid-induced and inflammatory pain by the selective ASIC3 inhibitor, APETx2. *Br.J.Pharmacol.* **161** 950. PMID: 20860671.

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