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DATASHEET

SLIGRL-NH2

Product overview

Name SLIGRL-NH2
Cat No HB2920
Biological description Overview

SLIGRL-NH2 is a PAR₂ peptide agonist which is specific for activation of PAR₂ over PAR₁ and PAR₄ (EC₅₀ = 0.5-2.0µM).

The peptide is derived from the N-terminus of the rat PAR₂ receptor sequence.

Uses

SLIGRL-NH2 is an itch-inducing agent which is commonly used to study histamine-independent itch. It evokes dose dependent scratching behaviour in mice. Interestingly, in pruritogen-responsive neurons that transmit the itch signal induced by SLIGRL-NH2, sex-related differences may exist.


The peptide has also been shown to enhance gastrointestinal transit in mice and rats

Biological action Active *in vivo*.
Purity Agonist
Description >95%
PAR₂ peptide agonist

Solubility & Handling

Storage instructions -20 °C
Solubility overview Soluble in water (1 mg/ml)
Important This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use

Chemical Data

Chemical name SLIGRL (modifications: C-terminal amide)
Molecular Weight 656.82
Chemical structure 
Molecular Formula C₂₉H₅₆N₁₀O₇
Sequence (one letter) SLIGRL
Modifications C-terminal amide
CAS Number 171436-38-7
PubChem identifier 9831050
SMILES CC[C@H](C)[C@@H](C(=O)NCC(=O)N[C@@H](CCCN=C(N)N)C(=O)N[C@@H](CC(C)C)C(=O)N)NC(=O)[C@H](CC(C)C)NC(=O)[C@H](CO)N
SGPMJRPYYIJZPC-JYAZKYGWSA-N
InChiKey MFCD03093421
MDL number

References

Protease-activated receptor-1 (PAR1) and PAR2 but not PAR4 mediate relaxations in lower esophageal sphincter.

Huang et al (2007) Regul Pept. 142(1-2)

PubMedID [17335921](#)

The protease-activated receptor-2-specific agonists 2-aminothiazol-4-yl-LIGRL-NH₂ and 6-aminonicotiny-LIGRL-NH₂ stimulate multiple signaling pathways to induce physiological responses in vitro and in vivo.

Flynn et al (2011) J Biol Chem 286(21)

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The distinct roles of two GPCRs, MrgprC11 and PAR2, in itch and hyperalgesia.

Liu et al (2011) Sci Signal. 4(181)

PubMedID [21775281](#)

Sex-related differences in SLIGRL-induced pruritus in mice.

Yamaura et al (2014) Life Sci. 94(1)

PubMedID [24239643](#)

Therapeutic effect of protease-activated receptor 2 agonist SLIGRL-NH₂ on loperamide-induced Sprague-Dawley rat constipation model and the related mechanism.

Zhang et al (30122898) Drug Des Devel Ther. 12
