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DATASHEET

Bradykinin

Product overview

Name	Bradykinin
Cat No	HB3101
Biological description	Bradykinin is an endogenous bradykinin receptor agonist with selectivity for B_2 over B_1 receptors.

Bradykinin interacts with its GPCRs (G-protein-coupled receptors) to induce changes in intracellular calcium via a variety of mechanisms (PLC, prostaglandins, protein kinases and PLA_2). Addition of bradykinin to NG 108-15 neural cells causes a transient hyperpolarization followed by prolonged cell depolarization.

Recently Bradykinin has also been shown to neuron-generating division of neural progenitor cells through ERK activation

The peptide is involved in a variety of physiological and pathopysiological activities. It is a pro-inflammatory mediator and a potent vasodilator which exerts its vasodilatory actions by inducing endothelial release of NO (nitric oxide), prostacyclin and EDHF.

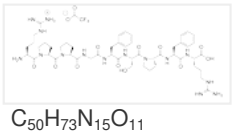
It is involved in cardiovascular homeostasis, inflammation and nociception. It also shows anti-proliferative and anti – fibrogenic effects.

Alternative names	BK
Purity	>95%
Description	Endogenous bradykinin receptor agonist

Solubility & Handling

Storage instructions	-20°C
Solubility overview	Soluble in water (1 mg/ml)
Storage of solutions	Prepare and use solutions on the same day if possible. Store solutions at -20°C for up to one month if storage is required. Equilibrate to RT and ensure the solution is precipitate free before use.
Shipping Conditions	Stable for ambient temperature shipping. Follow storage instructions on receipt.
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	RPPGFSPFR
Molecular Weight	1060.22
Chemical structure	
Molecular Formula	$C_{50}H_{73}N_{15}O_{11}$
CAS Number	58-82-2
PubChem identifier	439201
SMILES	C1C[C@H](N(C1)C(=O)[C@@H]2CCCN2C(=O)[C@H](CCCN=C(N)N)NC(=O)NCC(=O)N[C@@H](CC3=CC=CC=C3)C(=O)N[C@@H](CO)C(=O)N4CCC[C@H]4C(=O)N[C@@H](CC5=CC=CC=C5)

Chemical name	RPPGFSPFR
	C(=O)N[C@@H](CCCN=C(N)N)C(=O)O
InChiKey	QXZGBUJJYSLZLT-FDISYFBBSA-N
Appearance	Lyophilized powder

References

Bradykinin receptors and their antagonists.

Regoli et al (1998) Eur J Pharmacol. 348(1)
PubMedID 9650825

Endothelial function and bradykinin in humans.

Horning et al (1997) Drugs 2
PubMedID 9429844

Bradykinin promotes neuron-generating division of neural progenitor cells through ERK activation.

Pillat et al (2016) J Cell Sci. 129(18)
PubMedID 27528403

The kinin system--bradykinin: biological effects and clinical implications. Multiple role of the kinin system--bradykinin.

Golias et al (2007) Hippokratia 11(3)
PubMedID 19582206