

Hello Bio, Inc.
304 Wall St., Princeton, NJ 08540 USA

T. 609-683-7500
F. 609-228-4994

customercare-usa@m2stage.hellobio.com



DATASHEET

Substance P

Product overview

Name	Substance P
Cat No	HB2915
Biological description	Overview Substance P is an 11 amino acid neuropeptide member of the tachykinin peptide family and is found in high quantities in the CNS. It preferentially activates the neurokinin-1 receptor (NK1R). Uses and applications It is secreted by neurons, acts as a neurotransmitter and is involved in many biological processes such as nociception and inflammation. It is also essential in gut motility. Substance P also stimulates and modulates cytokine release in various cell types.
Alternative names	SP
Biological action	Peptide
Purity	>95%
Description	Sensory neuropeptide

Solubility & Handling

Storage instructions	-20 °C
Solubility overview	Soluble in water (0.8 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	RPKPQQFFGLM (modifications: C-terminal amide)
Molecular Weight	1347.65
Chemical structure	
Molecular Formula	C ₆₃ H ₉₈ N ₁₈ O ₁₃ S
Sequence (one letter)	RPKPQQFFGLM
Sequence (three letter)	H-Arg-Pro-Lys-Pro-Gln-Gln-Phe-Phe-Gly-Leu-Met-NH ₂
Modifications	Met-11 = C-terminal amide
CAS Number	33507-63-0
PubChem identifier	36511
SMILES	CC(C)C[C@@H](C(=O)N[C@@H](CCSC)C(=O)N)NC(=O)CNC(=O)[C@H](CC1=CC=CC=C1)NC(=O)[C@H](CC2=CC=CC=C2)NC(=O)[C@H](CCC(=O)N)NC(=O)[C@H](CCC(=O)N)NC(=O)[C@@H](3CCCN3C(=O)[C@H](CCCCN)NC(=O)[C@@H](4CCCN4C(=O)[C@H](CCCN=C(N)N)N
InChiKey	ADNPLDHMAVUMIW-CUZNLEPHSA-N
Protein length	11

References

Substance P and pain chronicity

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Johnson MB *et al* (2016) *Front Cell Neurosci* 10

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