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

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

customercare-usa@m2stage.hellobio.com

DATASHEET

Oxytocin

Product overview

Name	Oxytocin
Cat No	HB2929
Biological description	Oxytocin is a reproductive hormone and neuropeptide which is involved in reproduction and many other physiological and pathophysiological processes.
Biological action	Peptide
Purity	>95%
Description	Reproductive hormone. Neuropeptide.

Solubility & Handling

Storage instructions	-20°C (desiccate)
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	(2S)-1-[(4R,7S,10S,13S,16S,19R)-19-amino-7-(2-amino-2-oxoethyl)-10-(3-amino-3-oxopropyl)-13-[(2S)-butan-2-yl]-16-[(4-hydroxyphenyl)methyl]-6,9,12,15,18-pentaoxo-1,2-dithia-5,8,11,14,17-pentazacycloicosane-4-carbonyl]-N-[(2S)-1-[(2-amino-2-oxoethyl)amino]-4-methyl-1-oxopentan-2-yl]pyrrolidine-2-carboxamide
Molecular Weight	1007.19
Chemical structure	
Molecular Formula	$C_{43}H_{66}N_{12}O_{12}S_2$
Sequence (one letter)	CYIQNCPLG
Sequence (three letter)	Cys-Tyr-Ile-Gln-Asn-Cys-Pro-Leu-Gly
Modifications	Gly-9 = C-terminal amide, disulfide bridge between 1 - 6
CAS Number	50-56-6
PubChem identifier	439302
SMILES	CC[C@H](C)[C@H]1C(=O)N[C@H](C(=O)N[C@H](C(=O)N[C@@H](CSSC[C@@H](C(=O)N[C@H](C(=O)N1)CC2=CC=C(C=C2)O)N)C(=O)N3CCC[C@H]3C(=O)N[C@@H](CC(C)C)C(=O)NCC(=O)N)CC(=O)N)CCC(=O)N
InChiKey	CC[C@H](C)[C@H]1C(=O)N[C@H](C(=O)N[C@H](C(=O)N[C@@H](CSSC[C@@H](C(=O)N[C@H](C(=O)N1)CC2=CC=C(C=C2)O)N)C(=O)N3CCC[C@H]3C(=O)N[C@@H](CC(C)C)C(=O)NCC(=O)N)CC(=O)N)CCC(=O)N
MDL number	MFCD00076731
Protein length	9

References

Oxytocin role in enhancing well-being: a literature review

Ishak WW *et al* (2011) J Affect Disord 130

PubMedID 20584551

The oxytocin receptor system: structure, function, and regulation

Gimpl G *et al* (2001) Physiol Rev 81(2)
PubMedID 11274341

Oxytocin: the great facilitator of life

Lee HJ *et al* (2009) Prog Neurobiol 88(2)
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