

**Cat#** SP-100085-5  
**Description:** [Phe2,Orn8]-Oxytocin  
**Sequence:** Cys-Phe-Ile-Gln-Asn-Cys-Pro-Orn-Gly- NH2  
 (Disulfide bridge:Cys1-Cys6) ; MW 992.19  
**Size:** 5 mg  
**Purity:** >95%  
**Store:** Desiccated at -20oC.

The hypothalamic **Oxytocin** (OT) is a nine-amino acid peptide, which exerts multiple biological actions as a hormone and as neurotransmitter. OT stimulates uterine smooth muscle and mammary myoepithelial cell contraction, prostaglandin production by uterine endometrial and amnion cells, milk ejaculation from the mammary gland, and induction of specific mating behavior and maternal behaviors. Just before the onset of labor, uterine myometrium becomes extremely sensitive to oxytocin, for which it is a primary target tissue, because of a dramatic increase in the number of oxytocin receptors. OT initiates its physiological activity by interacting with the G protein-coupled **receptor** (GPCR) known as **oxytocin receptor (OTR)**. The encoded receptor is a 388-amino-acid polypeptide with 7 transmembrane domains typical of G protein-coupled receptors. Messenger RNAs for the receptor are of two sizes, 3.6 kilobases in breast, and 4.4 kilobases in ovary, uterine endometrium and myometrium. The mRNA level in the myometrium is very high at term.

### Specificity & Cross-reactivity

The OT15-P peptide sequence is 100% conserved in mouse, rat, human, bovine, sheep and other species

**General References:** 1. Rehbein M et al (1986) Biol Chem. Hoppe-Seyler 367, 695-704; Ivell R et al (1984) PNAS 81, 2006-2010; Mohr E et al (1988) FEBS Lett. 242, 144-148; Vhauvez MT et al (1981) BBRC 103, 595-603; Schlesinger DH et al (1980) FEBS Lett. 80, 371-373; Hara Y et al (1990) Brain res. Mol Brain res. 8, 319-324; ozen F et al (1995) PNAS 92, 200-204; Kumura T et al (1992) Nature 356, 526-529.

*All peptides are for in vitro research use only.*

Please consult "Frequently asked questions" section at our website for Guidance on storage and solubility of the peptides.  
[http://www.4adi.com/commerce/info/showpage.jsp?page\\_id=1088&category\\_id=2427](http://www.4adi.com/commerce/info/showpage.jsp?page_id=1088&category_id=2427)

### Related Items

Catalog#	ProdDescription
OT15-A	Anti-rat/human Oxytocin IgG #1, aff pure
OT15-P	Rat/human Oxytocin Control/blocking peptide #1
OT15-S	Anti-Rat/Human Oxytocin antiserum #1
OT51-P-1	Oxytocin (full length, 9-aa amide) pure peptide
OT51-P-5	Oxytocin (full length, 9-aa amide) pure peptide
OTR11-A	Anti-Rat Oxytocin Receptor IgG # 1, aff pure
OTR11-P	Rat Oxytocin Receptor Control/blocking peptide #1
OTR11-S	Anti-Rat Oxytocin Receptor antiserum # 1
PP-1580	Oxytocin Acetate
RP-1486	Human Oxytocin
SP-100084-5	"[Ile8]-Oxytocin [Cys-Tyr-Ile-Gln-Asn-Cys-Pro-Ile-Gly-NH2 (Disulfide bridge:Cys1-Cys6); MW: 1007.2]"
SP-100085-5	"[Phe2,Orn8]-Oxytocin [Cys-Phe-Ile-Gln-Asn-Cys-Pro-Orn-Gly- NH2 (Disulfide bridge:Cys1-Cys6) ; MW 992.19]"
SP-100086-5	"[Ser4,Ile8]-Oxytocin [Cys-Tyr-Ile-Ser-Asn-Cys-Pro-Ile-Gly-NH2 (Disulfide bridge: Cys1-Cys6) ; MW 966.15]"
SP-100087-5	[Thr4,Gly7]-Oxytocin [Cys-Tyr-Ile-Thr-Asn-Cys-Gly-Leu-Gly-NH2 (Disulfide bridge:Cys1-Cys6) ; MW 940.1]
SP-50501-5	Oxytocin [Cys-Tyr-Ile-Gln-Asn-Cys-Pro-Leu-Gly-NH2; MW: 17.2]

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