

## Product datasheet for RC224226

### Oxytocin neurophysin 1 (OXT) (NM\_000915) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Oxytocin neurophysin 1 (OXT) (NM_000915) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Oxytocin neurophysin 1
Synonyms:	OT; OT-NPI; OXT-NPI
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	<p>&gt;RC224226 representing NM_000915  <span style="color:red">Red</span>=Cloning site <span style="color:blue">Blue</span>=ORF <span style="color:green">Green</span>=Tags(s)</p> <p>TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCC<span style="color:red">CGGATCGCC</span></p> <p><span style="color:blue">ATGGCCGGCCCCAGCCTCGCTTGTCTGTCTGCTCGGCCTCCTGGCGCTGACCTCCGCCTGCTACATCCAGA  ACTGCCCTGGGAGGCAAGAGGGCCGCGCGGACCTCGACGTGCGCAAGTGCCTCCCCTGCGGCCCCGG  GGGCAAAGGCCGCTGCTTCGGGCCAATATCTGCTGCGCGGAAGAGCTGGGCTGCTTCGTGGCACCGCC  GAAGCGTGCCTGCCAGGAGGAGAACTACCTGCCGTGCGCCTGCCAGTCCGGCCAGAAGGCGTGGGGA  GCGGGGGCCGCTGCGCGTCTTGGGCCTCTGCTGCAGCCCGACGGCTGCCACGCCGACCCTGCCTGCGA  CGCGGAAGCCACCTTCTCCAGCGC</span></p> <p><span style="color:red">ACGCGT</span><span style="color:green">ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  ACAAGGATGACGACGATAAGGTTTAA</span></p>
Protein Sequence:	<p>&gt;RC224226 representing NM_000915  <span style="color:red">Red</span>=Cloning site <span style="color:green">Green</span>=Tags(s)</p> <p>MAGPSLACLLGLLALTSACYIQNCPLGGKRAAPDLVRKCLPCGPGGKGRFCGPNICCAEELGCFVGTAEALRCQEENYLPSPCQSGQKACGSGRCAVLGLCCSPDGCHADPACDAEATFSQR</p> <p><span style="color:red">TR</span><span style="color:green">TRPLEQKLISEEDLAANDILDYKDDDDKV</span></p>
Chromatograms:	<a href="https://cdn.origene.com/chromatograms/mk6102_h01.zip">https://cdn.origene.com/chromatograms/mk6102_h01.zip</a>
Restriction Sites:	Sgfl-Mlul



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**Cloning Scheme:**


**ACCN:** NM\_000915

**ORF Size:** 375 bp

**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

- Reconstitution Method:**
1. Centrifuge at 5,000xg for 5min.
  2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
  3. Close the tube and incubate for 10 minutes at room temperature.
  4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
  5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

**RefSeq:** [NM\\_000915.4](#)

**RefSeq Size:** 512 bp

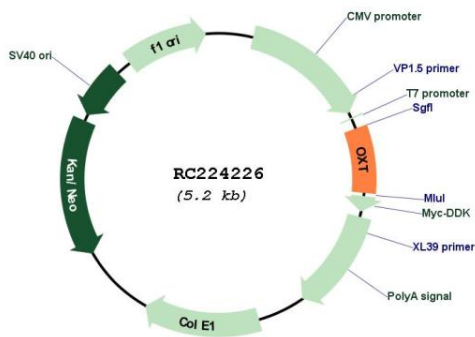
**RefSeq ORF:** 378 bp

**Locus ID:** 5020  
**UniProt ID:** [P01178](#)  
**Cytogenetics:** 20p13

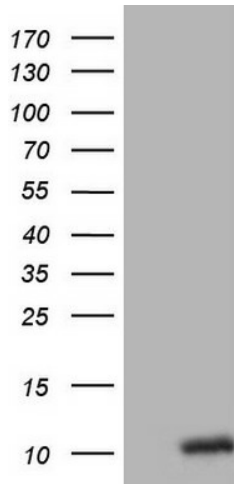
**Protein Families:** Secreted Protein  
**MW:** 12.72 kDa

**Gene Summary:** This gene encodes a precursor protein that is processed to produce oxytocin and neurophysin I. Oxytocin is a posterior pituitary hormone which is synthesized as an inactive precursor in the hypothalamus along with its carrier protein neurophysin I. Together with neurophysin, it is packaged into neurosecretory vesicles and transported axonally to the nerve endings in the neurohypophysis, where it is either stored or secreted into the bloodstream. The precursor seems to be activated while it is being transported along the axon to the posterior pituitary. This hormone contracts smooth muscle during parturition and lactation. It is also involved in cognition, tolerance, adaptation and complex sexual and maternal behaviour, as well as in the regulation of water excretion and cardiovascular functions. [provided by RefSeq, Dec 2013]

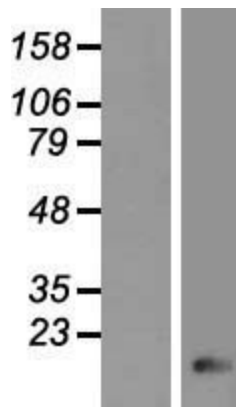
**Product images:**



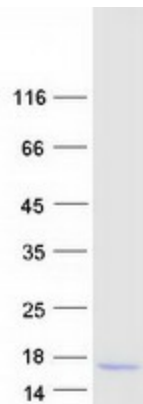
Circular map for RC224226



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY OXT (Cat# RC224226, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-OXT (Cat# [TA807052])(1:2000). Positive lysates [LY424458] (100ug) and [LC424458] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY424458]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC224226 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified OXT protein (Cat# [TP324226]). The protein was produced from HEK293T cells transfected with OXT cDNA clone (Cat# RC224226) using MegaTran 2.0 (Cat# [TT210002]).