

## Product datasheet for RC228105

### EMX2 (NM\_001165924) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** EMX2 (NM\_001165924) Human Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** EMX2  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >RC228105 representing NM\_001165924  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCCCGCATCGCC

ATGTTCCAGCCGGCGCCCAAGCGCTGCTTACCATCGAGTCGCTGGTGGCCAAGGACAGTCCCCTGCCCC  
 CCTCGCGCTCCGAGGACCCCATCCGTCCCGCGGCACTCAGCTACGCTAACTCCAGCCCCATAATCCGTT  
 CCTCAACGGCTTCACTCGGCCCGCCGCCGCCGGTAGGGCGCTCTACTCAACCCGGACTTGGTG  
 TTCGCCGAGGCGGTCTCGACCCGCCCAACCCCGCCGTGCCAGTGCACCCGGTGCCGCCGCCGACGCCC  
 TGGCCGCCACCCCTACCCTCCTCGCACTCGCCACCCCTATTGCTCGCAGCAGCGGGATCCGTC  
 CACCTTCTACCCCTGGCTATCCACCGCTACCGATATCTGGGTATCGCTTCCAAGGTAAGATGTT  
 TCAGAACCAGAAGAAAGTTCAAAGGCAGAAGCTGGAGGAAGAAGGCTCAGATTCGAACAAAAGAAA  
 AAAGGGACGCACCATAT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC228105 representing NM\_001165924  
 Red=Cloning site Green=Tags(s)

MFQPAPKRCFTIESLVAKDSPLPASRSEDPIRPAALSYANSSPINPFLNGFHSAAAAAAGRGVYSNPDLV  
 FAEAVSHPPNPAPVHPVPPHALAAHPLPSSHSPHPLFASQQRDPSTFYPLIHRYYLGHFRFQGKSMV  
 SEPKNKVQKAEAGGRRLRFATKEKRDAPY

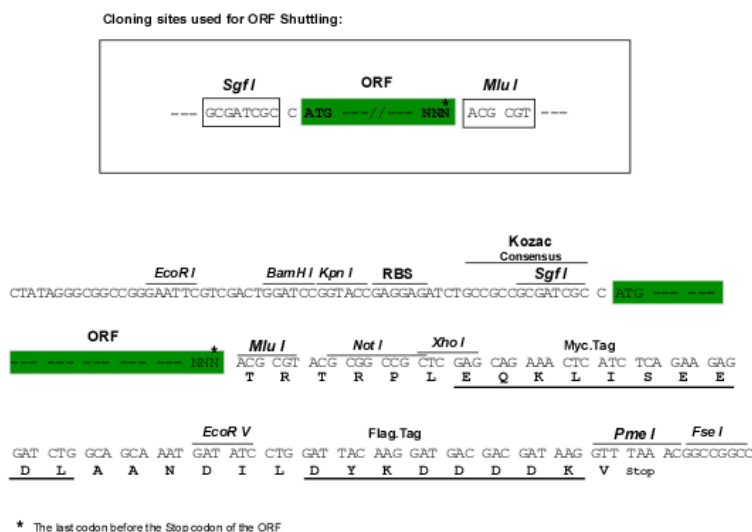
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/ja1427\\_a05.zip](https://cdn.origene.com/chromatograms/ja1427_a05.zip)

**Restriction Sites:** SgfI-MluI



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**Cloning Scheme:**


**ACCN:** NM\_001165924

**ORF Size:** 507 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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.

**RefSeq:** [NM\\_001165924.1](#), [NP\\_001159396.1](#)

RefSeq ORF: 510 bp

Locus ID: 2018

UniProt ID: [Q04743](#)

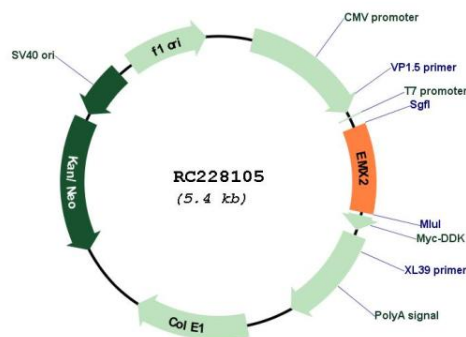
Cytogenetics: 10q26.11

Protein Families: Druggable Genome

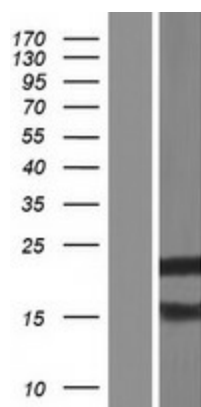
MW: 18.3 kDa

**Gene Summary:** This gene encodes a homeobox-containing transcription factor that is the homolog to the 'empty spiracles' gene in *Drosophila*. Research on this gene in humans has focused on its expression in three tissues: dorsal telencephalon, olfactory neuroepithelium, and urogenital system. It is expressed in the dorsal telencephalon during development in a low rostral-lateral to high caudal-medial gradient and is proposed to pattern the neocortex into defined functional areas. It is also expressed in embryonic and adult olfactory neuroepithelia where it complexes with eukaryotic translation initiation factor 4E (eIF4E) and possibly regulates mRNA transport or translation. In the developing urogenital system, it is expressed in epithelial tissues and is negatively regulated by HOXA10. Alternative splicing results in multiple transcript variants encoding distinct proteins.[provided by RefSeq, Sep 2009]

## Product images:



Circular map for RC228105



Western blot validation of overexpression lysate (Cat# [LY431133]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC228105 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).