

## Product datasheet for **SC326740**

### EMX2 (NM\_001165924) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	EMX2 (NM_001165924) Human Untagged Clone
Tag:	Tag Free
Symbol:	EMX2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>NCBI ORF sequence for NM_001165924, the custom clone sequence may differ by one or more nucleotides ATGTTCCAGCCGCGCCCAAGCGCTGCTTCACCATCGAGTCGCTGGTGGCCAAGGACAGT CCCCTGCCGCGCTCGCGCTCCGAGGACCCATCCGTCCC GCGGCACTCAGCTACGCTAAC TCCAGCCCATAAATCCGTTCTCAACGGCTTCCACTCGGCCGCGCCGCGCCGCGCGGT AGGGGCGTCTACTCCAACCCGGACTTGGTGTTCGCCGAGGCGGTCTCGACCCGCCAAC CCCGCCGTGCCAGTGCACCCGGTGCCGCGCCGCGCACGCCCTGGCCGCCACCCCTACCC TCCTCGCACTCGCCACACCCCTATTTCGCTCGCAGCAGCGGGATCCGTCCACCTTCTAC CCCTGGTCTATCCACCGTACCGATATCTGGGTCATCGCTTCCAAGGTAAGTATGGTT TCAGAACCGAAGAACAAGTTCAAAGGCAGAAGCTGGAGGAAGAAGGCTCAGATTGCA ACAAAAGAAAAAAGGGACGCACCATAT
Restriction Sites:	Please inquire
ACCN:	NM_001165924



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**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 TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.

**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 Size:** 2723 bp

**RefSeq ORF:** 510 bp

**Locus ID:** 2018

**UniProt ID:** [Q04743](#)

**Cytogenetics:** 10q26.11

**Protein Families:** Druggable Genome

**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]

Transcript Variant: This variant (2) lacks an exon in the coding region, compared to variant 1, which results in a frameshift and a protein (isoform 2) with a shorter and distinct C-terminus, compared to isoform 1. Isoform 2 lacks the C-terminal homeodomain of isoform 1.