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# Product datasheet for MR225479

## Esrrb (NM_001159500) Mouse Tagged ORF Clone

### Product data:

| | |
|---|---|
| **Product Type:** | Expression Plasmids |
| **Product Name:** | Esrrb (NM_001159500) Mouse Tagged ORF Clone |
| **Tag:** | Myc-DDK |
| **Symbol:** | Esrrb |
| **Synonyms:** | Err2; Errb; Estrrb; Nr3b2 |
| **Mammalian Cell Selection:** | Neomycin |
| **Vector:** | pCMV6-Entry (PS100001) |
| **E. coli Selection:** | Kanamycin (25 ug/mL) |

**ORF Nucleotide Sequence:**

>MR225479 representing NM_001159500
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCTGCTGAACCGAATGTCGTCCGAAGACAGGCACCTGGGCTCTAGTTGCGGCTCCTTCATCAAGACGG
AGCCATCCAGCCCGTCCTCGGGCATTGATGCCCTCAGCCACCACAGCCCCAGCGGCTCGTCGGACGCCAG
TGGTGGCTTTGGCATTGCCCTGAGCACCCACGCCAACGGTCTGGACTCGCCGCCTATGTTCGCAGGTGCG
GGGCTGGGAGGCAACCCGTGCCGCAAGAGCTACGAGGACTGTACTAGTGGTATCATGGAGGACTCCGCCA
TCAAATGCGAGTACATGCTTAACGCCATCCCCAAGCGCCTGTGCCTCGTGTGCGGGGACATTGCCTCTGG
CTACCACTACGGAGTGGCCTCCTGCGAGGCTTGCAAGGCGTTCTTCAAGAGAACCATTCAAGGCAACATC
GAGTACAACTGCCCGGCCACCAATGAATGTGAGATCACCAAACGGAGGCGCAAGTCCTGTCAGGCCTGCC
GATTCATGAAATGCCTCAAAGTGGGGATGCTGAAGGAAGGTGTGCGCCTTGACCGAGTTCGAGGAGGCCG
CCAGAAGTACAAGCGACGGCTGGATTCGGAGAACAGCCCCTACCTGAACCTGCCGATTTCCCCACCTGCT
AAAAAGCCATTGACTAAGATCGTCTCGAATCTACTAGGGGTTGAGCAGGACAAGCTGTATGCTATGCCTC
CCAACGATATCCCCGAGGGAGATATCAAGGCCCTGACCACTCTCTGTGAATTGGCAGATCGGGAGCTTGT
GTTCCTCATCAACTGGGCCAAGCACATCCCAGGCTTCCCCAGTCTGACACTTGGGGACCAGATGAGCCTG
CTGCAGAGTGCCTGGATGGAGATTCTCATCTTGGGCATCGTGTACCGCTCGCTCCCATACGATGACAAGC
TGGCATACGCCGAGGACTATATCATGGATGAGGAACACTCTCGCCTGGTAGGGCTGCTGGACCTTTACCG
AGCCATCCTGCAGCTGGTGCGCAGGTACAAGAAACTCAAGGTAGAGAAGGAAGAGTTTATGATCCTCAAG
GCCCTGGCCCTCGCCAACTCAGATTCGATGTACATTGAGAACCTGGAGGCGGTGCAGAAGCTCCAGGACC
TGCTGCACGAGGCGCTGCAGGACTATGAGCTGAGTCAGCGCCACGAGGAGCCGCGGAGGGCCGGCAAGCT
GCTGCTGACGCTGCCCCTGCTGAGGCAGACAGCCGCCAAAGCCGTGCAACACTTCTACAGTGTGAAACTG
CAGGGCAAGGTGCCCATGCACAAACTCTTCCTGGAGATGCTGGAGGCCAAGGTG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR225479 representing NM_001159500
Red=Cloning site Green=Tags(s)

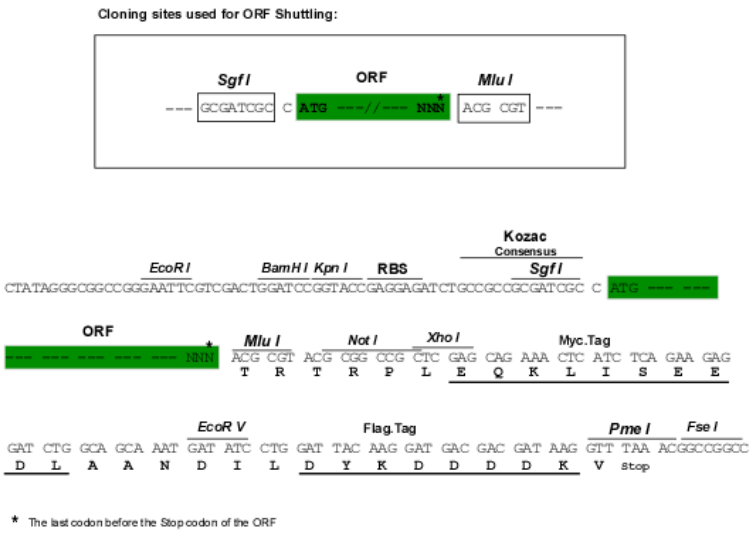
MLLNRMSSEDRHLGSSCGSFIKTEPSSPSSGIDALSHHSPSGSSDASGGFGIALSTHANGLDSPPMFAGA
GLGGNPCRKSYEDCTSGIMEDSAIKCEYMLNAIPKRLCLVCGDIASGYHYGVASCEACKAFFKRTIQGNI
EYNCPATNECEITKRRRKSCQACRFMKCLKVGMLKEGVRLDRVRGGRQKYKRRLDSENSPYLNLPISPPA
KKPLTKIVSNLLGVEQDKLYAMPPNDIPEGDIKALTTLCELADRELVFLINWAKHIPGFPSLTLGDQMSL
LQSAWMEILILGIVYRSLPYDDKLAYAEDYIMDEEHSRLVGLLDLYRAILQLVRRYKKLKVEKEEFMILK
ALALANSDSMYIENLEAVQKLQDLLHEALQDYELSQRHEEPRRAGKLLLTLPLLRQTAAKAVQHFYSVKL
QGKVPMHKLFLEMLEAKV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** https://cdn.origene.com/chromatograms/mm9034_h01.zip

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**




**ACCN:** NM_001159500

**ORF Size:** 1314 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.

**RefSeq:** NM_001159500.1, NP_001152972.1

**RefSeq Size:** 4309 bp

**RefSeq ORF:** 1317 bp

**Locus ID:** 26380

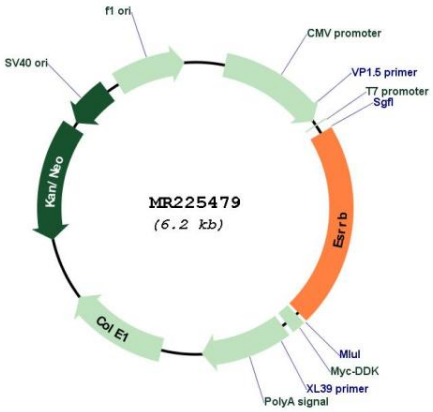
**UniProt ID:** Q61539

**Cytogenetics:** 12 40.49 cM

**MW:** 49.4 kDa

**Gene Summary:** Transcription factor that binds a canonical ESRRB recognition (ERRE) sequence 5'TCAAGGTCA-3' localized on promoter and enhancer of targets genes regulating their expression or their transcriptional activity (PubMed:27601327, PubMed:23169531, PubMed:23508100, PubMed:26206133, PubMed:20534447, PubMed:18662995, PubMed:18957414, PubMed:27723719, PubMed:23019124). Plays a role, in a LIF-independent manner, in maintainance of self-renewal and pluripotency of embryonic and trophoblast stem cells through different signaling pathways including FGF signaling pathway and Wnt signaling pathways (PubMed:18957414, PubMed:26206133, PubMed:20534447, PubMed:23040478, PubMed:23040477, PubMed:23019124, PubMed:23169531). Upon FGF signaling pathway activation, interacts with KDM1A by directly binding to enhancer site of ELF5 and EOMES and activating their transcription leading to self-renewal of trophoblast stem cells (PubMed:26206133). Also regulates expression of multiple rod-specific genes and is required for survival of this cell type (PubMed:20534447). Plays a role as transcription factor activator of GATA6, NR0B1, POU5F1 and PERM1 (PubMed:18662995, PubMed:23508100, PubMed:18957414). Plays a role as transcription factor repressor of NFE2L2 transcriptional activity and ESR1 transcriptional activity (By similarity). During mitosis remains bound to a subset of interphase target genes, including pluripotency regulators, through the canonical ESRRB recognition (ERRE) sequence, leading to their transcriptional activation in early G1 phase (PubMed:27723719). Can coassemble on structured DNA elements with other transcription factors like SOX2, POU5F1, KDM1A and NCOA3 to trigger ESRRB-dependent gene activation (PubMed:23019124, PubMed:23169531, PubMed:18662995, PubMed:26206133). This mechanism, in the case of SOX2 corecruitment prevents the embryonic stem cells (ESCs) to epiblast stem cells (EpiSC) transition through positive regulation of NR0B1 that inhibits the EpiSC transcriptional program (PubMed:23169531). Also plays a role inner ear development by controlling expression of ion channels and transporters and in early placentation (PubMed:9285590, PubMed:17765677).[UniProtKB/Swiss-Prot Function]

## Product images:




Circular map for MR225479