

## Product datasheet for **MG222310**

### Erc6 (NM\_001081221) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Erc6 (NM_001081221) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Erc6
Synonyms:	4732403I04; C130058G22Rik; CSB
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG222310 representing NM_001081221 Red=Cloning site Blue=ORF Green=Tags(s)

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**Protein Sequence:** >MG222310 representing NM\_001081221  
 Red=Cloning site Green=Tags(s)

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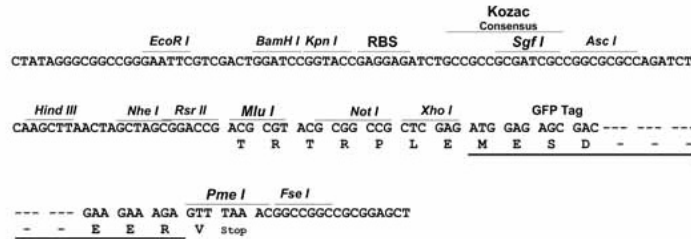
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TRTRPLE - GFP Tag - V

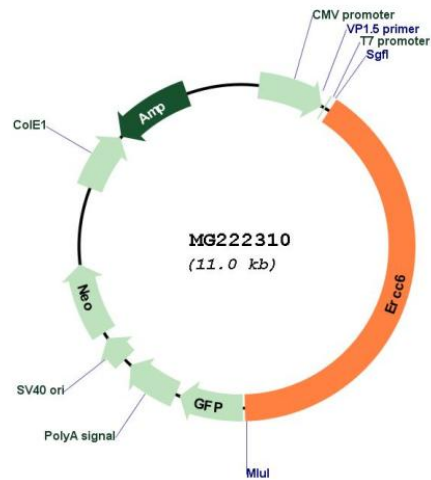
**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



## Plasmid Map:



ACCN: NM\_001081221

ORF Size: 4443 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\\_001081221.2](#)

**RefSeq Size:** 8422 bp

**RefSeq ORF:** 4446 bp

**Locus ID:** 319955

**UniProt ID:** [F8VPZ5](#)

**Cytogenetics:** 14 B

**Gene Summary:** Essential factor involved in transcription-coupled nucleotide excision repair which allows RNA polymerase II-blocking lesions to be rapidly removed from the transcribed strand of active genes (By similarity). Upon DNA-binding, it locally modifies DNA conformation by wrapping the DNA around itself, thereby modifying the interface between stalled RNA polymerase II and DNA (By similarity). It is required for transcription-coupled repair complex formation. It recruits the CSA complex (DCX(ERCC8) complex), nucleotide excision repair proteins and EP300 to the sites of RNA polymerase II-blocking lesions (By similarity). Plays an important role in regulating the choice of the DNA double-strand breaks (DSBs) repair pathway and G2/M checkpoint activation; DNA-dependent ATPase activity is essential for this function (By similarity). Regulates the DNA repair pathway choice by inhibiting non-homologous end joining (NHEJ), thereby promoting the homologous recombination (HR)-mediated repair of DSBs during the S/G2 phases of the cell cycle (By similarity). Mediates the activation of the ATM- and CHEK2-dependent DNA damage responses thus preventing the premature exit from the G2/M checkpoint (By similarity). Acts as a chromatin remodeler at DSBs; DNA-dependent ATPase-dependent activity is essential for this function (By similarity). Remodels chromatin by evicting histones from chromatin flanking DSBs, limiting RIF1 accumulation at DSBs thereby promoting BRCA1-mediated HR (By similarity). Required for stable recruitment of ELOA and CUL5 to DNA damage sites (By similarity). Involved in UV-induced translocation of ERCC8 to the nuclear matrix (By similarity). Essential for neuronal differentiation and neuritogenesis; regulates transcription and chromatin remodeling activities required during neurogenesis (By similarity).[UniProtKB/Swiss-Prot Function]