

Product datasheet for **MC224549**

Erc6 (NM_001081221) Mouse Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: Erc6 (NM_001081221) Mouse Untagged Clone
Tag: Tag Free
Symbol: Erc6
Synonyms: 4732403I04; C130058G22Rik; CSB
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
Fully Sequenced ORF: >MC224549 representing NM_001081221
Red=Cloning site **Blue**=ORF **Orange**=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGTTCCACGAGGAAGTCCCACTCCACTCACCTCAGGAGCAAGACTGTTTACCAAGTCAGCATGCCA
ATGCTTACAAAGACATGCCAGTTGGGCAGGAGAATGGTGGGTCTCAGAGGCCGGGAGTGCCTCTCCTC
TACTTCTGTGAGTATGGCCATCCACATCTGCTGAAGCTTGTGTGGCAGCCACAAGCGTGGCCCG
ACCTGTACACATTGATCGGCATCAGATCCCTGCAAGTTGAGCCAGTGCAGGCGCTGGAGCTGCAGG
GCCTGGTGTGGACGTCTATGACCAGGCTGTCTGGAACAAGGCGTGTTCAGCAGGTGGACAGTGCAT
GCATGAGGCCAGCTGTGTGGCCAGCTTGTGATGCGGAGAAGGAGTATCAGTCAGTCTGGATGACCTC
ATGTATGTACAACATCCCTGAGGCAAATCAATAAAATTATAGAGCAACTTAGCCCTCAAGCTGCCAGCA
ACAGAGACATCAACAGGAACTAGATCCGTGAAGCGACAGAAGTATAACAAGGAACAACAGTAAAGAA
GATAACTGCAAAACAGAAACGTCTCCAGGCCATTCTCGGAGGGCTGGGTCCAAGTGGAACTGGATCAT
GCCAGCTAGAGGAGGACGATGCAGAGCCAGGCCATCATGTCTGGCAGTATGCTCATGCCTGCCAGG
AGACCGCTGGGAGGAGCTTATCCGCACCTGGCCAGATGACACCGTTTGGTACCCAGCCCTCAGAAACA
GGAGAAAAGCCAGAAAATAATGCTGAATGAAGCATCAGGCTTTGAAAATATTTGGCAGAGCAAGCA
CAACTTTCGTTTGAAGGAAGAAACAAGCTGCTACTAAAAGAACAGCTAAAAAAGCTATAGTCATATCCG
AGTCAAGCCGAGCAGCAATTGAAACCAAGGAGCAGCAGAGAAGCCAAGTCTCTCAGACAGACAAGCG
CCTGAAGAAGCACAGCAGGAACTCCAGAGGAGGGCGCTGCAGTCCAGGGCAAAGTGGGATTGCCGAGC
GGGAAGAAACCTTTGGAGCTGAGGTGAGGCCAGAGGCCAGGGAGACTGAGGGTGGAGGTCTGGGT
CCTCTCCACCGATGGGAGGAGGAGGAAGAACAAGAGGAGGAGGAAGGGGTAGCCAGCTGTCTTCTGA
TGACGTTAGCTATGAGCTGAAGCCTCTTCGGAAGAGGCAGAAATACCAGAAGAAAGTCCCAGTTCAGGAG
ATCGACGATGACTTCTTCCAAGTCTGAGGAGGAAGATGAAGCTATGGAAGGAAGAGGAGGAGGCCGAA
AGGTAGCCAGGCCCAAGACGATGGAGATGAGGATTATTATAAGCAGCGTTAAGGAGGTGGAACAGGCT
GAGGCTGCAGGACAAAGAGAAACGCTGAAGCTTGAAGATGATTCTGAGGAGAGCGATGCCGAATTTGAC
GAAGGTTTCAAAGTGCCGGTTTTCTGTTCAAAAAGCTCTTAAAGTATCAGCAGACAGGTGTTAGGTGCC



TGTGGGAATTGCACTGCCAGCAGGCAGGAGGAATCTGGGAGACGAAATGGGATTGGGCAAGACCATCCA
 GATAATTGCCCTTCTGGCAGGTCTGAGCTACAGCAAGTCAGGACTCGCGGTTCAAATTACAGGTTCCGAG
 GGACTAGGCCCCACTATAATTGTCTGCCAACGACAGTGATGCATCAGTGGTGAAGGAATCCACACGT
 GGTGGCCTCCATTAGAGTGGCAGTTCTGCATGAAACAGGTTCTACACCCACAAAAAGGAGAGGCTGAT
 TCGAGATATTGTTATTGTATGGAGTTTGTATAACTTCATATTCATACATCCGACTGATGCAAGATGAC
 ATTAGCAGACATGACTGGCACTACGTCATCTTAGATGAAGGACACAAAATCGAAATCCAATGCTGCAG
 TCACCTTGCTTGCAACAGTTCCGGACACCTCATCGGATTATCTTGTCTGGCTACCCGATCGAGAATAA
 CCTCCGAGAGCTGTGGTCACTCTTCGACTTCATCTTCCAGGAAAGCTGGGCACATTGCCTGTGTTATG
 GAGCAGTTCTCTGCCCCATCACCATGGGAGGCTATTCCAATGCTTCCCAGTACAGGTTAAAACTGCTT
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 GTCTACCAGAATTTCAATTGATTCTAAAGCAGTCTACAGGATTCTCAATGGAGAAAATCAGATTTTCTCTG
 GACTTGTAGCGCTGAGGAAGATCTGCAACCACCCTGACCTCTTTTCTGGCGGCCCAAGAACGCCAGTGG
 TCCTCCAGAGGATGAGCTGGAAGAAGAGCAGTTTGGACACTGGAGACGCTCTGGGAAAATGATTGTTGT
 GAGTCTTTGCTGAAAATATGGCACAGGCAGGGTCAGCGGGTGTCTGCTGTTTTCCAGTCCAGGCAGATGC
 TACACATACTGGAAGTGTCTGAGAGCCATAAGTATTCTATCTCAAGATGGATGGGACCACCACCAT
 AGCGTCAAGACAGCCGCTGATTACAAAATACAATGAGGACACGTCATCTTTGTCTTTCTCTGACCACA
 CGGGTGGGTGGCTTAGGAGTGAACCTGACCGGTGCCAACAGAGTCATCATCTACGACCCAGACTGGAATC
 CAAGCACCACACACAGGCCCGGGAGCGAGCATGGAGGATAGGTGAGAAGAAGCAGGTGACTGTCTACAG
 GCTTCTGACGGCTGGCACCATTGAGGAAAAGATCTACCACCGACAAAATCTCAAGCAATTTTTGACAAA
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 CCAGTCTGACGCTCCAGGGCACTGAGACAAGTGTATTTTTGAGGAAACGGGCTCCAGTATTCAGAC
 ACCCAAATGCCAGTTAAAAAAAAGGACTTCCACAGTCTGGGAACAGATCCCAAATGCAAGAAGCCCCCT
 GTTTCTGACACACCTGCAAAATGCTGCCACCCTGATTGGAGAAAAACCTAAGGCGCGGGAGCTACAGGAA
 GAAGTGTCACTTCTGGAGAAAGTGGTCTTTCAAAGGCGACCATGACACAAATGGGAACAGAGCTAGCAG
 GTTTGCTTTTGGAGAAGAGACAGATGCAGGGTCCACACTGGAGCATCTCTCAGTGTGAGTGGAGATGGG
 AAGCATTAGATTCTCCAACAGTTGACCACACATCCAGGCCACCAGTGGAGGCAAGCACCAGTGAAGAAGC
 AGGTTCTTCTATGCAGGGGCGCTGCCAGGCTCAGACAGAACCTGTTCCCATGAGTGAACAAATGGA
 AGGTCAGTTTTCTAAGTACAAATCCAAAAGGAAGCATGATGCATCTGAGGAAGAGACCACAGAGAAACGT
 CCACAGCCCAAGCAAAAGGCCAAGAAGTCCAAGCATTGCAGAGATGCTAAGTTTGAAGGAACTCGAGTCC
 CGCACCTGGTGAAGAAAAGCAGGTACCGCCAGCAAAACAGTGGAGGAGGGCGGAGCCAAGGACCGGAG
 CAGCGATGATTATGTGTTGGAAAAGCTTTTCAAAAATCAGTGGGCGTGCACAGGCTCGTGAGGCATGAT
 GCCATCATAGATGGGTCCAGTCCAGATTATGTGCTGGTGGAAAGCAGAAGCCAACCGAGTGGCTCAGGACG
 CCTGAAAGCTCTGAGGCTCTCTCGTACGAAATGCCTGGGGGCGAGCATCTGGTGTCCCACCTGGACTGG
 CCACAGGGGGATTTCTGGTGCACCAACAGGAGTAAAGAAATAGGTTTCGGTTCAGAAAAGGGACTCCAGCCTC
 CCTGTGCAGCATCTTCACTAACAGAAAAGACTCAGAACAACATGAAAAAGGAGGGAAAAAGCTCACA
 CCCCTGACACTTCAGTGGCAAAGAAGATGGAGCATCTGTGTCTGGAGCGCCAGTTCCTCCTCCCTCTT
 GGCCAGAATGCGAGCAAGAAACCATGATTTTTGCCGGAGCGCTTAGAGAGTGACAGTGAACATCTTGT
 GAGGCTGCTGCCGTGCCCTCCCTGCGGCACCGAACACGACGACCTTCTGGTGGACATGAGGAACTTCATTG
 CTTTCCAGGCCAGGTGGATGGCCAGGCCAGCACTCAGGAAATCCTGCAGGAGTTTGTGAGTCCAAGCTGTC
 CGTGGCACAGTCTGTGCTTCCGAGAAGTGTGAGAAATCTGTGCAATTTCCATAGAAGTCTGTTGGG
 GAAGGGATTTGGAAGCTGAAGCCAGAATACTGCTAA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI
ACCN: NM_001081221
Insert Size: 4446 bp

OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
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:	<ol style="list-style-type: none">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:	<u>NM_001081221.1</u> , <u>NP_001074690.1</u>
RefSeq Size:	8422 bp
RefSeq ORF:	4446 bp
Locus ID:	319955
UniProt ID:	<u>F8VPZ5</u>
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 neurogenesis; regulates transcription and chromatin remodeling activities required during neurogenesis (By similarity).[UniProtKB/Swiss-Prot Function]