

Recombinant Mouse Ercc6 Protein, Myc/DDK-tagged

Cat. No. Ercc6-2855M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Purified recombinant protein of mouse full-length excision repair cross-complementing rodent repair deficiency, complementation group 6 (Ercc6), with C-terminal MYC/DDK tag, expressed in HEK293T cells.
Species	Mouse
Source	HEK293
Description	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. 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. 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. 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. 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. Mediates the activation of the ATM- and CHEK2-dependent DNA damage responses thus preventing the premature exit from the G2/M checkpoint. Acts as a chromatin remodeler at DSBs; DNA-dependent ATPase-dependent activity is essential for this function. Remodels chromatin by evicting histones from chromatin flanking DSBs,

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limiting RIF1 accumulation at DSBs thereby promoting BRCA1-mediated HR. Required for stable recruitment of ELOA and CUL5 to DNA damage sites. Involved in UV-induced translocation of ERCC8 to the nuclear matrix. Essential for neuronal differentiation and neuritogenesis; regulates transcription and chromatin remodeling activities required during neurogenesis.

Molecular Mass	166.4 kDa
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining
Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Storage	Store at -80 centigrade after receiving vials.
Concentration	>50 µg/mL as determined by microplate BCA method
Storage Buffer	25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.

GENE INFORMATION

Gene Name	Ercc6 excision repair cross-complementing rodent repair deficiency, complementation group 6 [<i>Mus musculus</i> (house mouse)]
Official Symbol	Ercc6
Synonyms	ERCC6; excision repair cross-complementing rodent repair deficiency, complementation group 6; DNA excision repair protein ERCC-6; CS group B correcting; CSB; 4732403I04; C130058G22Rik
Gene ID	319955

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mRNA Refseq	NM_001081221
Protein Refseq	NP_001074690
UniProt ID	F8VPZ5

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