Recombinant Mouse Xrcc6 Protein, Myc/DDK-tagged

Cat. No. Xrcc6-7024M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Purified recombinant protein of Mouse X-ray repair complementing defective repair in Chinese hamster cells 6 (Xrcc6), with C-terminal MYC/DDK tag, expressed in HEK293T cells.
Species	Mouse
Source	HEK293
Description	Single-stranded DNA-dependent ATP-dependent helicase. Has a role in chromosome translocation. The DNA helicase II complex binds preferentially to fork-like ends of double-stranded DNA in a cell cycle-dependent manner. It works in the 3'-5' direction. Binding to DNA may be mediated by XRCC6. Involved in DNA non-homologous end joining (NHEJ) required for double-strand break repair and V(D)J recombination. The XRCC5/6 dimer acts as regulatory subunit of the DNA-dependent protein kinase complex DNA-PK by increasing the affinity of the catalytic subunit PRKDC to DNA by 100-fold. The XRCC5/6 dimer is probably involved in stabilizing broken DNA ends and bringing them together. The assembly of the DNA-PK complex to DNA ends is required for the NHEJ ligation step. Required for osteocalcin gene expression. Probably also acts as a 5'-deoxyribose-5-phosphate lyase (5'-dRP lyase), by catalyzing the beta-elimination of the 5' deoxyribose-5-phosphate at an abasic site near double-strand breaks. 5'-dRP lyase activity allows to 'clean' the termini of abasic sites, a class of nucleotide damage commonly associated with strand breaks, before such broken ends can be joined. The XRCC5/6 dimer together with APEX1 acts as a negative regulator of transcription. Plays a role in the regulation of DNA virus-

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	mediated innate immune response by assembling into the HDP-RNP complex, a complex that serves as a platform for IRF3 phosphorylation and subsequent innate immune response activation through the cGAS-STING pathway.
Molecular Mass	69.5 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	Xrcc6 X-ray repair complementing defective repair in Chinese hamster cells 6 [Mus musculus (house mouse)]
Official Symbol	Xrcc6
Synonyms	XRCC6; X-ray repair complementing defective repair in Chinese hamster cells 6; X-ray repair cross-complementing protein 6; CTC75; CTCBF; Ku p70; 5-dRP/AP lyase Ku70; DNA repair protein XRCC6; thyroid autoantigen 70 kDa; ku autoantigen protein p70 homolog; 5-deoxyribose-5-phosphate lyase Ku70; CTC box-binding factor 75 kDa subunit; ATP-dependent DNA helicase 2 subunit 1; ATP-dependent DNA helicase II 70 kDa subunit; Ku70; 70kDa; G22p1

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Gene ID	14375
mRNA Refseq	NM_010247
Protein Refseq	NP_034377
UniProt ID	P23475

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