

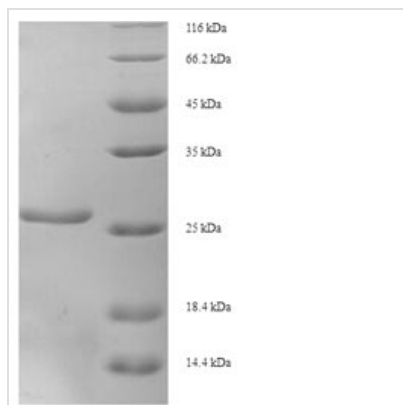


# Recombinant Human X-ray repair cross-complementing protein 5 (XRCC5), partial

<b>Product Code</b>	CSB-EP026233HU
<b>Relevance</b>	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. In association with NAA15, the XRCC5/6 dimer binds to the osteocalcin promoter and activates osteocalcin expression. The XRCC5/6 dimer 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. XRCC5 probably acts as the catalytic subunit of 5'-dRP activity, and 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.
<b>Abbreviation</b>	Recombinant Human XRCC5 protein, partial
<b>Storage</b>	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
<b>Uniprot No.</b>	P13010
<b>Alias</b>	86 kDa subunit of Ku antigen;ATP-dependent DNA helicase 2 subunit 2ATP-dependent DNA helicase II 80 kDa subunitCTC box-binding factor 85 kDa subunit ;CTC85 ;CTCBFDNA repair protein XR;CC5Ku80Ku86Lupus Ku autoantigen protein p86Nuclear factor IVThyroid-lupus autoantigen ;TLAAX-ray repair complementing defective repair in Chinese hamster cells 5 (double-strand-break rejoining)
<b>Product Type</b>	Recombinant Protein
<b>Immunogen Species</b>	Homo sapiens (Human)
<b>Purity</b>	Greater than 90% as determined by SDS-PAGE.
<b>Sequence</b>	LTIGSNLSIRIAAYKSILQERVKKTWTVVDAKTLKKEDIQKETVYCLNDDDETEVL KEDIQGFYRGSDIVPFSKVDDEEQMKYKSEGKCFSVLGFCKSSQVQRRFFMGN QVLKVFAARDDEAAVALSSLIHALDDLDMVAIVRYAYDKRANPQVGVAFFPHIK HNYECLVYVQLPFMEDLRQYMFSSLSKNSKKYAPTEAQLNAVD



<b>Research Area</b>	Epigenetics and Nuclear Signaling
<b>Source</b>	E.coli
<b>Target Names</b>	XRCC5
<b>Protein Names</b>	Recommended name: X-ray repair cross-complementing protein 5 EC= 3.6.4.- Alternative name(s): 86 kDa subunit of Ku antigen ATP-dependent DNA helicase 2 subunit 2 ATP-dependent DNA helicase II 80 kDa subunit CTC box-binding facto
<b>Expression Region</b>	251-455aa
<b>Notes</b>	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
<b>Tag Info</b>	N-terminal 6xHis-tagged
<b>Mol. Weight</b>	27.4kDa
<b>Protein Length</b>	Partial

**Image**


(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

**Reconstitution** We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL. We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

**Shelf Life** The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.