

Human XRCC5 & XRCC6 Heterodimer Protein

Catalog Number: CT018-H07B



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

KARP-1; KARP1; KU80; Ku86; KUB2; NFIV

Protein Construction:

A DNA sequence encoding the XRCC5 (P13010) (Met 1-Ile 732) was fused with a polyhistidine tag at the N-terminus, constructed the plasmid 1; A DNA sequence encoding the XRCC6 (P12956) (Met 1-Asp 609) was fused with a polyhistidine tag at the N-terminus, constructed the plasmid 2. The two plasmids were co-expressed and the heterodimer was purified.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: His & His

Molecular Mass:

The recombinant heterodimer of human XRCC5/XRCC6 comprises 1379 (751 + 628) amino acids and has a calculated molecular mass of 157 (85 + 72) kDa. The apparent molecular mass of rh XRCC5/XRCC6 heterodimer is approximately 70 & 85 kDa respectively in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 20mM Tris, 500mM NaCl, 10% gly, pH 8.0

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

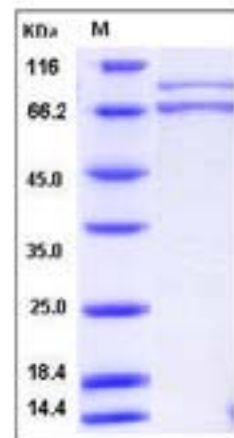
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

X-ray repair cross-complementing protein 5, also known as 86 kDa subunit of Ku antigen, ATP-dependent DNA helicase 2 subunit 2, ATP-dependent DNA helicase II 80 kDa subunit, CTC box-binding factor 85 kDa subunit, DNA repair protein XRCC5, Lupus Ku autoantigen protein p86, TLAA and XRCC5, is a nucleus and chromosome which belongs to the ku80 family. XRCC5 is a single stranded DNA-dependent ATP-dependent helicase. XRCC5 has a role in chromosome translocation. X-ray repair cross-complementing protein 6, also known as 5'-deoxyribose-5-phosphate lyase Ku70, ATP-dependent DNA helicase 2 subunit 1, ATP-dependent DNA helicase II 70 kDa subunit, 70 kDa subunit of Ku antigen, ATP-dependent DNA helicase 2 subunit 1, CTC box-binding factor 75 kDa subunit, Lupus Ku autoantigen protein p70, Thyroid-lupus autoantigen and XRCC6, is a nucleus and chromosome which belongs to the ku70 family. Heterodimer of a XRCC6 and a XRCC5 subunit associates in a DNA-dependent manner with PRKDC to form the DNA-dependent protein kinase complex DNA-PK, and with the LIG4-XRCC4 complex. The dimer also associates with NAA15, and this complex binds to the osteocalcin promoter and activates osteocalcin expression.

References

1. Featherstone C. et al., 1999, Mutat Res. 434: 3-15. 2. Zhang Z. et al., 2001, J Biol Chem. 276: 38231-6. 3. Hsu H-L. et al., 2002, DNA Repair 1: 225-35.

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