Data Sheet (Cat.No.TMPY-02287)

TargetMol

Ku70 & Ku80 Heterodimer Protein, Human, Recombinant (His)

General Information

Synonyms:	KARP1;XRCC5 & XRCC6;KUB2;KU80;KARP-1;Ku86;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. Predicted N terminal: His & His
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	P13010&P12956
Molecular Weight:	157 kDa (predicted); 70 & 85 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 20 mM Tris, 500 mM NaCl, 10% gly, pH 8.0.Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstituted with sterile deionized water to 0.15 mg/mL. Reconstitution conditions may vary depending on the lot.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

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 8 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 ku8 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 Ku7, ATP-dependent DNA helicase 2 subunit 1, ATP-dependent DNA helicase II 7 kDa subunit, 7 kDa subunit of Ku antigen, ATP-dependent DNA helicase 2 subunit 1, CTC box-binding factor 75 kDa subunit, Lupus Ku autoantigen protein p7, Thyroid-lupus autoantigen and XRCC6, is a nucleus and chromosome which belongs to the ku7 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.

Reference

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