



LD Biopharma, Inc.
9924 Mesa Rim Road Suite B
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human XRCC3 Protein
Catalog Number: hRP-0709
Manufacturer: LD Biopharma, Inc.

Introduction

Human DNA repair protein XRCC3 gene encodes a member of the RecA/Rad51-related protein family that participates in homologous recombination to maintain chromosome stability and repair DNA damage. This gene functionally complements Chinese hamster irs1SF, a repair-deficient mutant that exhibits hypersensitivity to a number of different DNA-damaging agents and is chromosomally unstable. A rare microsatellite polymorphism in this gene is associated with cancer in patients of varying radio-sensitivity.

Full-length human XRCC3 gene was constructed with 15 N-terminal T7 tag. This protein was expressed in *E. coli* as inclusion bodies, refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

Gene Symbol: XRCC3 (CMM6)
Accession Number: NP_005423
Species: Human
Size: 100 µg / Vial
Composition: 1.0 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, arginine, DTT and Glycerol.
Storage: In Liquid. Keep at -20°C for long term storage. Product is stable at 4 °C for at least 30 days.

Key References

Price, E.A., et al., *Rare microsatellite polymorphisms in the DNA repair genes XRCC1, XRCC3 and XRCC5 associated with cancer in patients of varying radiosensitivity.* Somat. Cell Mol. Genet. 23 (4), 237-247 (1997)



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Liu,N.,et al., *XRCC2 and XRCC3, new human Rad51-family members, promote chromosome stability and protect against DNA cross-links and other damages*. Mol. Cell 1 (6), 783-793 (1998)

Vral,A., et al., *Combined effect of polymorphisms in Rad51 and Xrcc3 on breast cancer risk and chromosomal radiosensitivity*. Mol Med Report 4 (5), 901-912 (2011)

Applications

1. May be used for human cell DNA damage repair pathway regulation study in vitro using protein intracellular delivery method.
2. May be used as specific substrate protein for kinase and ubiquitin enzymes.
3. May be used as antigen for specific antibody production.

Quality Control

1. Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGEFGSDLDLLDLNPR I IAAIKKAKLKSVEVLHFS GPDLKRLTNLSSPEVWH
LLRTASLHLRGSSILTALQLHQKERFPTQHQRSLGCPVLDALLRGGLPLDGITELAGRSSAG
KTQLALQLCLAVQFPRQHGGLEAGAVYICTEDAFPHKRLQQLMAQQPRLRTDVPGELLQKLRFG
SQIFIEHVADVDTLLECVNKKVPVLLSRGMARLVVIDSVAAPFRCEFDSQASAPRARHLQSLGA
TLRELSSAFQSPVLCINQVTEAMEEQGAAHGPLGFWDERVSPALGITWANQLLVRLLADRLREE
EAALGCPARTLRVLSAPHLPPSSCSYTTISAEGVRGTPGTQSH