

DNA repair protein XRCC3 Recombinant Protein | XRCC3 recombinant protein

Recombinant Human DNA repair protein XRCC3

CATALOG # AAA18622	HOST E Coli or Yeast or Baculovirus or Mammalian Cell
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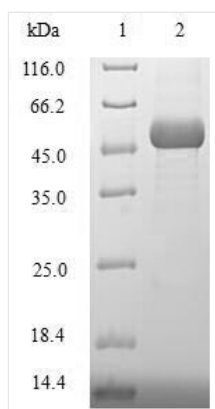
PRODUCT SYNONYMS

DNA repair protein XRCC3; Recombinant Human DNA repair protein XRCC3; X-ray repair cross-complementing protein 3; XRCC3 recombinant protein

PRODUCT SPECIFICATIONS

Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE.
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Sequence Positions	1-346aa; Full Length
Sequence	MDLDLLDLNP RIIAAIKKAK LKSVKEVLHF SGPDLKRLTN LSSPEVWHLL RTASLHLRGS SILTALQLHQ QKERFPTQHQ RLSLGCPVLD ALLRGGLPLD GITELAGRSS AGKTQLALQL CLAVQFPRQH GGLEAGAVYI CTEDAFPHKR LQQLMAQQPR LRTDVPGE LL QKLRFSGS QIF IEHVADVDTL LECVNKKVPV LLSRGMARLV VIDSVAAPFR CEFDSQASAP RARHLQSLGA TLRELSSAFQ SPVLCINQVT EAMEEQGAAH GPLGFWDERV SPALGITWAN QLLVRLADR LREEEAALGC PARTLRVLSA PHLPPSSCSY TISAEGVRGT PGTQSH
Preparation and Storage	Store at -20 degree C, for extended storage, conserve at -20 degree C or -80 degree C.

IMAGES



SDS-PAGE

ADDITIONAL INFORMATION

Related Product Information for XRCC3 recombinant protein

Involved in the homologous recombination repair (HRR) pathway of double-stranded DNA, thought to repair chromosomal fragmentation, translocations and deletions. Part of the RAD21 paralog protein complex CX3 which acts in the BRCA1-BRCA2-dependent HR pathway. Upon DNA damage, CX3 acts downstream of RAD51 recruitment; the complex binds predominantly to the intersection of the four duplex arms of the Holliday junction (HJ) and to junctions of replication forks. Involved in HJ resolution and thus in processing HR intermediates late in the DNA repair process; the function may be linked to the CX3 complex and ses to involve GEN1 during mitotic cell cycle progression. Part of a PALB2-scaffolded HR complex containing BRCA2 and RAD51C and which is thought to play a role in DNA repair by HR. Plays a role in regulating mitochondrial DNA copy number under conditions of oxidative stress in the presence of RAD51 and RAD51C.

Product Categories/Family for XRCC3 recombinant protein	Epigenetics and Nuclear Signaling
References	XRCC2 and XRCC3, new human Rad51-family members, promote chromosome stability and protect against DNA cross-links and other damages.Liu N., Lamerdin J.E., Tebbs R.S., Schild D., Tucker J.D., Shen M.R., Brookman K.W., Siciliano M.J., Walter C.A., Fan W., Narayana L.S., Zhou Z.-Q., Adamson A.W., Sorensen K.J., Chen D.J., Jones N.J., Thompson L.H.Mol. Cell 1:783-793(1998) NIEHS SNPs program Identification and purification of two distinct complexes containing the five RAD51 paralogs.Masson J.Y., Tarsounas M.C., Stasiak A.Z., Stasiak A., Shah R., McIlwraith M.J., Benson F.E., West S.C.Genes Dev. 15:3296-3307(2001) Variants in DNA double-strand break repair genes and breast cancer susceptibility.Kuschel B., Auranen A., McBride S., Novik K.L., Antoniou A., Lipscombe J.M., Day N.E., Easton D.F., Ponder B.A., Pharoah P.D., Dunning A.Hum. Mol. Genet. 11:1399-1407(2002) RAD51C interacts with RAD51B and is central to a larger protein complex in vivo exclusive of RAD51.Miller K.A., Yoshikawa D.M., McConnell I.R., Clark R., Schild D., Albala J.S.J. Biol. Chem. 277:8406-8411(2002) Involvement of Rad51C in two distinct protein complexes of Rad51 paralogs in human cells.Liu N., Schild D., Thelen M.P., Thompson L.H.Nucleic Acids Res. 30:1009-1015(2002) Domain mapping of the Rad51 paralog protein complexes.Miller K.A., Sawicka D., Barsky D., Albala J.S.Nucleic Acids Res. 32:169-178(2004) RAD51C is required for Holliday junction processing in mammalian cells.Liu Y., Masson J.Y., Shah R., O'Regan P., West S.C.Science 303:243-246(2004) Cellular localization of human Rad51C and regulation of ubiquitin-mediated proteolysis of Rad51.Bennett B.T., Knight K.L.J. Cell. Biochem. 96:1095-1109(2005) ATM and ATR substrate analysis reveals extensive protein networks responsive to DNA damage.Matsuoka S., Ballif B.A., Smogorzewska A., McDonald E.R. III, Hurov K.E., Luo J., Bakalarski C.E., Zhao Z., Solimini N., Lerenthal Y., Shiloh Y., Gygi S.P., Elledge S.J.Science 316:1160-1166(2007) Discovery of a novel function for human Rad51 maintenance of the mitochondrial genome.Sage J.M., Gildemeister O.S., Knight K.L.J. Biol. Chem. 285:18984-18990(2010) Initial characterization of the human central proteome.Burkard T.R., Planyavsky M., Kaupe I., Breitwieser F.P., Buerckstuemmer T., Bennett K.L., Superti-Furga G., Colinge J.BMC Syst. Biol. 5:17-17(2011) hSWS1.SWSAP1 is an evolutionarily conserved complex required for efficient homologous recombination repair.Liu T., Wan L., Wu Y., Chen J., Huang J.J. Biol. Chem. 286:41758-41766(2011) N-terminal acetylome analyses and functional insights of the N-terminal acetyltransferase NatB.Van Damme P., Lasa M., Polevoda B., Gazquez C., Elosegui-Artola A., Kim D.S., De Juan-Pardo E., Demeyer K., Hole K., Larrea E., Timmerman E., Prieto J., Arnesen T., Sherman F., Gevaert K., Aldabe R.Proc. Natl. Acad. Sci. U.S.A. 109:12449-12454(2012) The RAD51 paralogs ensure cellular protection against mitotic defects and aneuploidy.Rodrigue A., Coulombe Y., Jacquet K., Gagne J.P., Roques C., Gobeil S., Poirier G., Masson J.Y.J. Cell Sci. 126:348-359(2013) Rad51 paralog complexes BCDX2 and CX3 act at different stages in the BRCA1-BRCA2-dependent homologous recombination pathway.Chun J., Buechelmaier E.S., Powell S.N.Mol. Cell. Biol. 33:387-395(2013) Breast cancer-associated missense mutants of the PALB2 WD40 domain, which directly binds RAD51C, RAD51 and BRCA2, disrupt DNA repair.Park J.Y., Singh T.R., Nassar N., Zhang F., Freund M., Hanenberg H., Meetei A.R., Andreassen P.R.Oncogene 33:4803-4812(2014) Ring-shaped Rad51 paralog protein complexes bind Holliday junctions and replication forks as visualized by electron microscopy.Compton S.A., Ozgur S., Griffith J.D.J. Biol. Chem. 285:13349-13356(2010) A variant within the DNA repair gene XRCC3 is associated with the development of melanoma skin cancer.Winsey S.L., Haldar N.A., Marsh H.P., Bunce M., Marshall S.E., Harris A.L., Wojnarowska F., Welsh K.I.Cancer Res. 60:5612-5616(2000)

NCBI AND UNIPROT INFORMATION

NCBI GI #	153946427
NCBI GeneID	7517
NCBI Accession #	NP_001093588.1
NCBI GenBank Nucleotide #	NM_001100118.1
UniProt Accession #	O43542 ; O43568 ; Q9BU18
Molecular Weight	50.8 kDa
NCBI Official Full Name	DNA repair protein XRCC3
NCBI Official Synonym Full Names	X-ray repair complementing defective repair in Chinese hamster cells 3
NCBI Official Symbol	XRCC3
NCBI Official Synonym Symbols	CMM6
NCBI Protein Information	DNA repair protein XRCC3

UniProt Protein Name	DNA repair protein XRCC3
UniProt Gene Name	XRCC3
UniProt Entry Name	XRCC3_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://www.aaabiotech.com/xrcc3-recombinant-protein-e-coli/18622>