

Ribonucleoside-diphosphate reductase 1 subunit beta Recombinant Protein | nrdB recombinant protein

Recombinant Escherichia coli Ribonucleoside-diphosphate reductase 1 subunit beta

CATALOG # AAA114581	HOST E Coli or Yeast or Baculovirus or Mammalian Cell
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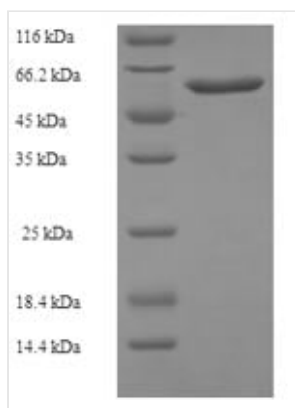
PRODUCT SYNONYMS

Ribonucleoside-diphosphate reductase 1 subunit beta; Recombinant Escherichia coli Ribonucleoside-diphosphate reductase 1 subunit beta; Protein B2; Protein R2; Ribonucleotide reductase 1; nrdB 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	2-376aa; Full Length
Sequence	AYTTFSTQKN DQLKEPMFFG QPVNVARYDQ QKYDIFEKLI EKQLSFFWRP EEVDVSRDRI DYQALPEHEK HIFISNLKYQ TLLDSIQGRS PNVALPLIS IPELETWVET WAFSETIHSR SYTHIIRNIV NDPSVVFDDI VTNEQIQKRA EGISSYYDEL IEMTSYWHLL GEGHTVNGK TVTVSLRELK KKLYLCLMSV NALEAIRFYV SFACSFABAE RELMEGNAKI IRLIARDEAL HLTGTQHMLN LLRSGADDPE MAEIAEECKQ ECYDLFVQAA QQEKDWADYL FRDGSMIGLN KDILCQYVEY ITNIRMQAVG LDLPFQTRSN PIPWINTWLV SDNVQVAPQE VEVSSYLVGQ IDSEVDTDDL SNFQL
Sequence Length	376
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 nrdB recombinant protein	Provides the precursors necessary for DNA synthesis. Catalyzes the biosynthesis of deoxyribonucleotides from the corresponding ribonucleotides. R2 contains the tyrosyl radical required for catalysis.
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References

Primary structure of the Escherichia coli ribonucleoside diphosphate reductase operon.Carlson J., Fuchs J.A., Messing J.Proc. Natl. Acad. Sci. U.S.A. 81:4294-4297(1984) Construction of a contiguous 874-kb sequence of the Escherichia coli-K12 genome corresponding to 50.0-68.8 min on the linkage map and analysis of its sequence features.Yamamoto Y., Aiba H., Baba T., Hayashi K., Inada T., Isono K., Itoh T., Kimura S., Kitagawa M., Makino K., Miki T., Mitsuhashi N., Mizobuchi K., Mori H., Nakade S., Nakamura Y., Nashimoto H., Oshima T., Oyama S., Saito N., Sampei G., Satoh Y., Sivasundaram S., Tagami H., Takahashi H., Takeda J., Takemoto K., Uehara K., Wada C., Yamagata S., Horiuchi T.DNA Res. 4:91-113(1997) The complete genome sequence of Escherichia coli K-12.Blattner F.R., Plunkett G. III, Bloch C.A., Perna N.T., Burland V., Riley M., Collado-Vides J., Glasner J.D., Rode C.K., Mayhew G.F., Gregor J., Davis N.W., Kirkpatrick H.A., Goeden M.A., Rose D.J., Mau B., Shao Y.Science 277:1453-1462(1997) Highly accurate genome sequences of Escherichia coli K-12 strains MG1655 and W3110.Hayashi K., Morooka N., Yamamoto Y., Fujita K., Isono K., Choi S., Ohtsubo E., Baba T., Wanner B.L., Mori H., Horiuchi T.Mol. Syst. Biol. 2:E1-E5(2006) Cloning, overproduction, and purification of the B2 subunit of ribonucleoside-diphosphate reductase.Salowe S.P., Stubbe J.J. Bacteriol. 165:363-366(1986) Three-dimensional structure of the free radical protein of ribonucleotide reductase.Nordlund P., Sjoeberg B.-M., Eklund H.Nature 345:593-598(1990) Structure and function of the Escherichia coli ribonucleotide reductase protein R2.Nordlund P., Eklund H.J. Mol. Biol. 232:123-164(1993) Crystal structure of reduced protein R2 of ribonucleotide reductase the structural basis for oxygen activation at a dinuclear iron site.Logan D.T., Su X.-D., Aaberg A., Regnstroem K., Hajdu J., Eklund H., Nordlund P.Structure 4:1053-1064(1996) Binding of allosteric effectors to ribonucleotide reductase protein R1 reduction of active-site cysteines promotes substrate binding.Eriksson M., Uhlin U., Ramaswamy S., Ekberg M., Regnstroem K., Sjoeberg B.-M., Eklund H.Structure 5:1077-1092(1997) Characterization of Y122F R2 of Escherichia coli ribonucleotide reductase by time-resolved physical biochemical methods and X-ray crystallography.Tong W., Burdi D., Riggs-Gelasco P., Chen S., Edmondson D., Huynh B.H., Stubbe J., Han S., Arvai A., Tainer J.Biochemistry 37:5840-5848(1998) Crystal structures of two self-hydroxylating ribonucleotide reductase protein R2 mutants structural basis for the oxygen-insertion step of hydroxylation reactions catalyzed by diiron proteins.Logan D.T., De;Mare F., Persson B.O., Slaby A., Sjoeberg B.-M., Nordlund P.Biochemistry 37:10798-10807(1998) Crystal structures of oxidized dinuclear manganese centres in Mn-substituted class I ribonucleotide reductase from Escherichia coli carboxylate shifts with implications for O2 activation and radical generation.Hogbom M., Andersson M.E., Nordlund P.J. Biol. Inorg. Chem. 6:315-323(2001)

NCBI AND UNIPROT INFORMATION

NCBI GI #	16130170
NCBI GeneID	946732
NCBI Accession #	NP_416738.1
NCBI GenBank Nucleotide #	NC_000913.3
UniProt Accession #	P69924; P00453
Molecular Weight	45.4 kDa
NCBI Official Full Name	ribonucleoside-diphosphate reductase 1, beta subunit, ferritin-like protein
NCBI Official Symbol	nrdB
NCBI Official Synonym Symbols	ECK2227; ftsB; JW2229
NCBI Protein Information	ribonucleoside-diphosphate reductase 1, beta subunit, ferritin-like protein
UniProt Protein Name	Ribonucleoside-diphosphate reductase 1 subunit beta
UniProt Gene Name	nrdB
UniProt Synonym Gene Names	ftsB
UniProt Entry Name	RIR2_ECOLI

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.