

Ribonucleoside-diphosphate reductase 1 subunit alpha Recombinant Protein | nrdA recombinant protein

Recombinant Escherichia coli Ribonucleoside-diphosphate reductase 1 subunit alpha

CATALOG # AAA116119	HOST E Coli or Yeast or Baculovirus or Mammalian Cell
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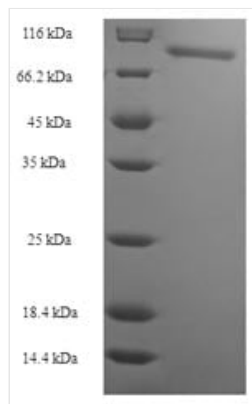
PRODUCT SYNONYMS

Ribonucleoside-diphosphate reductase 1 subunit alpha; Recombinant Escherichia coli Ribonucleoside-diphosphate reductase 1 subunit alpha; Protein B1; Ribonucleoside-diphosphate reductase 1 R1 subunit; Ribonucleotide reductase 1; nrdA 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	1-761aa; Full Length
Sequence	MNQNLLVTKR DGSTERINLD KIHRLVDWAA EGLHNVSISQ VELRSHIQFY DGIKTSDIHE TIKAAADLI SRDAPDYQYL AARLAIFHLR KKAYGQFEPP ALYDHVVKMV EMGKYDNHLL EDYTEEEFKQ MDTFIDHHRD MTFSYAAVKQ LEGKYLQNR VTGEIYESAQ FLYILVAACL FSNYPRETRL QYVKRFYDAV STFKISLPTP IMSGVRTPTR QFSSCVLIEC GDSLDSINAT SSAIVKYVSQ RAGIGINAGR IRALGSPiRG GEAFHTGCIP FYKHFQTAVK SCSQGGVRGG AATLFYPMWH LEVESLLVLK NNRGVEGNRV RHMDYGVQIN KLMYTRLLKG EDITLFSPSD VPGLYDAFFA DQEEFERLYT KYEKDDSIRK QRVKAVELFS LMMQERASTG RIYIQNV DHC NTHSPFDP AI APVRQSNLCL EIALPTKPLN DVNDENGEIA LCTLSAFNLG AINNLEDEEE LAILAVRALD ALLDYQDYPI PAAKRGAMGR RTLIGVIN F AYYLAKHGKR YSDGSANNLT HKTFEAIQYY LLKASNELAK EQGACPW FNE TTYAKGILPI DTYKKDLDTI ANEPLHYDWE ALRESIKTHG LRNSTLSALM PSETSSQISN ATNGIEPPRG YVSIKASKDG ILRQVVPDYE HLH DAYELLW EMPGNDGYLQ LVGIMQKFID QSISANTNYD PSRFPSGKVP MQQLKDLLT AYKFGVKTLY YQNTRDGAED AQDDLVP SIQ DDGCESGACK I
Sequence Length	761
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 nrdA recombinant protein	Provides the precursors necessary for DNA synthesis. Catalyzes the biosynthesis of deoxyribonucleotides from the corresponding ribonucleotides. R1 contains the binding sites for both substrates and allosteric effectors and carries out the actual reduction of the ribonucleotide. It also provides redox-active cysteines.
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) Nucleotide sequence of the gene coding for the large subunit of ribonucleotide reductase of Escherichia coli. Correction.Nilsson O., Aaberg A., Lundqvist T., Sjoeborg B.-M.Nucleic Acids Res. 16:4174-4174(1988) Sjoeborg B.-M.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) Protein B1 of ribonucleotide reductase. Direct analytical data and comparisons with data indirectly deduced from the nucleotide sequence of the Escherichia coli nrdA gene.Sjoeborg B.-M., Eriksson S., Joernvall H., Carlquist M., Eklund H.Eur. J. Biochem. 150:423-427(1985) Evidence for two different classes of redox-active cysteines in ribonucleotide reductase of Escherichia coli.Aaberg A., Hahne S., Karlsson M., Larsson A., Ormoe M., Aahgren A., Sjoeborg B.-M.J. Biol. Chem. 264:12249-12252(1989) Two conserved tyrosine residues in protein R1 participate in an intermolecular electron transfer in ribonucleotide reductase.Ekberg M., Sahlin M., Eriksson M., Sjoberg B.M.J. Biol. Chem. 271:20655-20659(1996) Lysine acetylation is a highly abundant and evolutionarily conserved modification in Escherichia coli.Zhang J., Sprung R., Pei J., Tan X., Kim S., Zhu H., Liu C.F., Grishin N.V., Zhao Y.Mol. Cell. Proteomics 8:215-225(2009) Structure of ribonucleotide reductase protein R1.Uhlin U., Eklund H.Nature 370:533-539(1994) A new mechanism-based radical intermediate in a mutant R1 protein affecting the catalytically essential Glu441 in Escherichia coli ribonucleotide reductase.Persson A.L., Eriksson M., Katterle B., Potsch S., Sahlin M., Sjoberg B.M.J. Biol. Chem. 272:31533-31541(1997) 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., Sjoeborg B.-M., Eklund H.Structure 5:1077-1092(1997) Binding specificity and mechanistic insight into glutaredoxin-catalyzed protein disulfide reduction.Berardi M.J., Bushweller J.H.J. Mol. Biol. 292:151-161(1999)

NCBI AND UNIPROT INFORMATION

NCBI GI #	16130169
NCBI GeneID	946612
NCBI Accession #	NP_416737.1
NCBI GenBank Nucleotide #	NC_000913.3
UniProt Accession #	P00452; P78088; P78177
Molecular Weight	101.8 kDa
NCBI Official Full Name	ribonucleoside-diphosphate reductase 1, alpha subunit
NCBI Official Symbol	nrdA
NCBI Official Synonym Symbols	dnaF; ECK2226; JW2228
NCBI Protein Information	ribonucleoside-diphosphate reductase 1, alpha subunit
UniProt Protein Name	Ribonucleoside-diphosphate reductase 1 subunit alpha
UniProt Gene Name	nrdA
UniProt Synonym Gene Names	dnaF
UniProt Entry Name	RIR1_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.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com
Online datasheet: <https://www.aaabiotech.com/nrda-recombinant-protein-e-coli/116119>