

32-4359: Recombinant E.Coli Transcription Termination/Antitermination L Factor

Alternative Name : Transcription elongation protein nusA, N utilization substance protein A, L factor, nusA, ECK3158, JW3158, b3169, Transcription Termination/Antitermination L Factor.

Description

Source : Escherichia Coli. NusA Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 495 amino acids (1-495a.a.) and having a molecular mass of 54 kDa. NusA is an important player in both prevention and enhancement of transcriptional termination. NusA is important both in Rho-dependent and intrinsic termination, as well as in lambda and other phage antitermination systems. The NusA gene was first identified by isolation of the nusA1 mutation, which limits bacteriophage- λ growth by preventing the antitermination activity of the λ N protein. NusA plays a role in transcriptional antitermination in the cell. It has been shown to specifically aid in read-through of the RNA polymerase genes rpoB and rpoC, as well as in successful synthesis of the ribosomal RNA genes. Additionally to its anti-termination role, NusA is needed for both Rho-dependent and intrinsic transcriptional termination. NusA is obligatory for Rho-dependent termination in lambda phage and in the cell. NusA plays a role in intrinsic termination and the inhibition of RNA elongation. However NusA interacts with all three subunits of RNA polymerase, its termination activity primarily depends on its interaction with the carboxy-terminus of RpoA. NusA induces conformational change in RNA polymerase & prevents RNA interaction with RpoA. This binding sequentially activates NusA, allowing it to bind RNA and promote formation of hairpins at intrinsic termination sites. NusA binds Rho, and participates with sigma70 for binding to the core RNA polymerase complex. NusA does not compete with NusG for binding to either Rho or the polymerase, despite modulating the same process as NusG in both cases.

Product Info

Amount : 50 μ g
Purification : Greater than 95.0% as determined by SDS-PAGE.
Content : NusA protein solution contains 1x PBS pH-7.4.
Storage condition : Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.
Amino Acid : MNKEILAVVE AVSNEKALPR EKIFEALESA LATATKKKYE QEIDVRVQID
 RKSGDFDTFRRWLVDVETQ PTKEITLEAA RYEDESLNLG DYVEDQIESV TFDRIITTQTA
 KQVIVQKVREAERAMVVDQF REHEGEIITG VVKKVNRDNI SLDLGNNAEA VILREDMLPR
 ENFRPGDRVR GVLYSVRPEA RGAQLFVTRS KPEMLIELFR IEVPEIGEEV IEIKAAARDP
 GSRAKIAVKT NDKRIDPVG A CVGMRGARVQ AVSTELGGER IDIVLWDDNP AQFVINAMAP
 ADVASIVVDE DKHTMDIAVE AGNLAQAIGR NGQNVRLASQ LSGWELNVMT DDLQAKHQA
 EAHAIDTFT KYLDIDEDFA TVLVEEGFST LEELAYVPMK ELLEIEGLDE PTVEALRERA
 KNALATIAQA QEESLGDNKP ADDLLNLEGV DRDLAFKLAA RGVCTLEDLA EQGIDDLADI
 EGLTDEKAGA LIMAARNICW FGDEA.

