

## Nosiheptide precursor Recombinant Protein | nosM recombinant protein

Recombinant Streptomyces actuosus Nosiheptide precursor

CATALOG #  
**AAA115116**

HOST  
**E Coli or Yeast or Baculovirus or Mammalian Cell**

### PRODUCT SYNONYMS

Nosiheptide precursor; Recombinant Streptomyces actuosus Nosiheptide precursor; Antibiotic 9671-RP1; nosM 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      | 1-50aa; Full Length                                                                    |
| Sequence                | MDAAHLSDLD IDALEISEFL DESRLEDSEV VAKVMSASCT TCECCSCSS                                  |
| Sequence Length         | 50                                                                                     |
| 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 nosM recombinant protein

Inhibits bacterial protein biosynthesis by binding to ribosomes. Specifically, binds to the complex of 23S rRNA and ribosomal protein L11 (RPLK) in the 50S ribosomal subunit. While allowing a weak binding of elongation factor G (EF-G) to the ribosome and subsequent GTP-hydrolysis, probably impairs conformational changes in both the ribosome and EF-G which are necessary for translocation. In vitro, inhibits Gram-positive bacteria *S. aureus* strain 209P (MIC=0. 0009 µg/ml), *S. aureus* strain 133 (MIC=0. 0019 µg/ml), *S. aureus* strain B3 (MIC=0. 003 µg/ml), *S. aureus* strain Hb (MIC=0. 003 µg/ml), *M. citreus* strain 8411 (MIC=0. 0038 µg/ml), *M. lysodeikticus* strain 4698 (MIC=0. 003 µg/ml), *S. lutea* strain 9341 (MIC=0. 0011 µg/ml), *S. faecalis* strain 9790 (MIC=0. 0007 µg/ml), *S. viridans* (MIC=0. 0065 µg/ml), *S. pyogenes* hollyticus strain Dig7 (MIC=0. 00028 µg/ml), *D. pneumoniae* strain Til (MIC=0. 00015 µg/ml), *N. catrrhalis* (MIC=0. 0017 µg/ml), *L. casei* strain 6633 (MIC=0. 003 µg/ml), *B. cereus* strain 6630 (MIC=0. 0071 µg/ml) and various isolates of *L. monocytogenes*. In vitro, inhibits Gram-negative bacterium *P. multocida* strain A125 (MIC=0. 0024 µg/ml) but not *M. smegmatis* strain 6630, *S. typhimurium*, *A. aerogenes* strain 8308, *P. vulgaris*, *K. pneumoniae* strain 10031, *S. marcescens* strain A476, *P. aeruginosa* strain Bass or *B. bronchiseptica* strain CN387. Does not inhibit Gram-negative bacterium *E Coli* strain 9637 but does inhibit purified ribosomes from *E Coli*. In vivo, has no systemic effect in mice infected with staphylococci or streptococci when applied orally or subcutaneously. Has a local effect in mice infected subcutaneously or intraperitoneally with staphylococci when applied immediately afterwards. Is not toxic to mice

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| References | <p>Nosiheptide biosynthesis featuring a unique indole side ring formation on the characteristic thiopeptide framework.Yu Y., Duan L., Zhang Q., Liao R., Ding Y., Pan H., Wendt-Pienkowski E., Tang G., Shen B., Liu W.ACS Chem. Biol. 4:855-864(2009) Nosiheptide biosynthesis featuring a unique indole side ring formation on the characteristic thiopeptide framework.Yu Y., Duan L., Zhang Q., Liao R., Ding Y., Pan H., Wendt-Pienkowski E., Tang G., Shen B., Liu W.ACS Chem. Biol. 4:855-864(2009) Nosiheptide, a sulfur-containing peptide antibiotic isolated from Streptomyces actuosus 40037.Benazet F., Cartier M., Florent J., Godard C., Jung G., Lunel J., Mancy D., Pascal C., Renaut J., Tarridec P., Theilleux J., Tissier R., Dubost M., Ninet L.Experientia 36:414-416(1980) Nosiheptide, a sulfur-containing peptide antibiotic isolated from Streptomyces actuosus 40037.Benazet F., Cartier M., Florent J., Godard C., Jung G., Lunel J., Mancy D., Pascal C., Renaut J., Tarridec P., Theilleux J., Tissier R., Dubost M., Ninet L.Experientia 36:414-416(1980). The mode of action of nosiheptide (multhiomycin) and the mechanism of resistance in the producing organism.Cundliffe E., Thompson J.J. Gen. Microbiol. 126:185-192(1981) The mode of action of nosiheptide (multhiomycin) and the mechanism of resistance in the producing organism.Cundliffe E., Thompson J.J. Gen. Microbiol. 126:185-192(1981) Structural basis for contrasting activities of ribosome binding thiazole antibiotics.Lentzen G., Klinck R., Matassova N., Aboul-ela F., Murchie A.I.Chem. Biol. 10:769-778(2003) Mapping the binding site of thiopeptide antibiotics by proximity-induced covalent capture.Baumann S., Schoof S., Harkal S.D., Arndt H.D.J. Am. Chem. Soc. 130:5664-5666(2008) Molecular determinants of microbial resistance to thiopeptide antibiotics.Baumann S., Schoof S., Bolten M., Haering C., Takagi M., Shin-ya K., Arndt H.D.J. Am. Chem. Soc. 132:6973-6981(2010) Antimicrobial susceptibilities of Listeria monocytogenes isolated in Japan.Okada Y., Okutani A., Suzuki H., Asakura H., Monden S., Nakama A., Maruyama T., Igimi S.J. Vet. Med. Sci. 73:1681-1684(2011) NosA catalyzing carboxyl-terminal amide formation in nosiheptide maturation via an enamine dealkylation on the serine-extended precursor peptide.Yu Y., Guo H., Zhang Q., Duan L., Ding Y., Liao R., Lei C., Shen B., Liu W.J. Am. Chem. Soc. 132:16324-16326(2010)</p> |
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NCBI AND UNIPROT INFORMATION

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|----------------------------|-----------------------|
| NCBI GI #                  | 363805424             |
| UniProt Accession #        | C6FX52                |
| Molecular Weight           | 32.4 kDa              |
| NCBI Official Full Name    | Nosiheptide           |
| UniProt Protein Name       | Nosiheptide precursor |
| UniProt Gene Name          | <b>nosM</b>           |
| UniProt Synonym Gene Names | NOS                   |
| UniProt Entry Name         | NOSM_STRAS            |

**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.