

Nitrile-specifier protein 1 (NSP1), Recombinant Protein

Cat *RP02348*

Size 0.02 mg (*E-Coli*)/ 0.02 mg (*Yeast*)/ 0.1 mg (*E-Coli*)/ 0.1 mg
(*Yeast*)/ 0.02 mg (*Baculovirus*)/ 0.02 mg (*Mammalian-Cell*)/ 0.1

Species mg (*Baculovirus*)/ 1 mg (*E-Coli*)/ 0.1 mg (*Mammalian-Cell*)/ 1
mg (*Yeast*)/ 1 mg (*Baculovirus*)/ 0.5 mg (*Mammalian-Cell*)
Arabidopsis thaliana (Mouse-ear cress)

Full Product Name

Recombinant Arabidopsis thaliana Nitrile-specifier protein 1 (NSP1)

Product Gene Name

NSP1 recombinant protein

Product Synonym Gene Name

NSP1

Purity

Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific)

Sequence

MAQKLEAKGG EMGDVWDDGV YENVRKVVYVG QAQYGIQAFVK FEYVNGSQVVG VGDHGGKKE LGVEEFEIDA
DDYIVYVEGY REKVNMTSE MITFLSIKTF KGKTSHPKIEK RPKVGFVLHG GKIVGFHGRS TDVLHSLGAY
VSLSSSTIKLL GKWKVEQKG EGPGLRCSHG IAQVGNKIYS FGGEFTPNQP IDKHLVFDL ETRTWSISPA
TGDVPHLSCL GVRMVSQGST LYVFGGRDAS RQYNGFYSD TTTNEWKLLT PVEEGTPRS FHSMAADEEN
VYVFGGVSAT ARLNTLDSYN IVDKKWFHCS TPGDSLARG GAGLEVQVGK VVVYGFNGC EVDDVHYDYP
VQDKWTQVET FGVRPSERSV FASAAIGKHI VIFGGEIAMD PLAHVGPQQL TDGTFALDTE TLQWERLDKF
GGEETPSSR GWTASTTATI DGKKGLVMHG GKAPTNDRFD DLFFYGIDSA

Sequence Positions

1-470, Full length protein

Format

Lyophilized or liquid (Format to be determined during the manufacturing process)

Host

E Coli or Yeast or Baculovirus or Mammalian Cell

Molecular Weight

51,670 Da

Storage

Store at -20°C. For long-term storage, store at -20°C or -80°C. Store working aliquots at 4°C for up to one week.
Repeated freezing and thawing is not recommended.

Protein Family

Nucleoporin

NCBI Accession

NP_001030709.1

NCBI GI

79313259

NCBI GenBank Nucleotide

FOR RESEARCH OR FURTHER MANUFACTURING USE ONLY

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Size 0.02 mg (E-Coli)/ 0.02 mg (Yeast)/ 0.1 mg (E-Coli)/ 0.1 mg
(Yeast)/ 0.02 mg (Baculovirus)/ 0.02 mg (Mammalian-Cell)/ 0.1

mg (Baculovirus)/ 1 mg (E-Coli)/ 0.1 mg (Mammalian-Cell)/ 1

mg (Yeast)/ 1 mg (Baculovirus)/ 0.5 mg (Mammalian-Cell)

NCBI GeneID

820887

NCBI Official Full Name

nitrile specifier protein 1

NCBI Official Symbol

NSP1

NCBI Official Synonym Symbols

ATMLP-470; ATNSP1; MYROSINASE-BINDING PROTEIN-LIKE PROTEIN-470; nitrile specifier protein 1;
NITRILE SPECIFIER PROTEIN 1; T2O4.9

NCBI Protein Information

nitrile specifier protein 1

NCBI Summary

Encodes a nitrile-specifier protein NSP1 responsible for constitutive and herbivore-induced simple nitrile formation in rosette leaves. NSP1 is one out of five (At3g16400/NSP1, At2g33070/NSP2, At3g16390/NSP3, At3g16410/NSP4 and At5g48180/NSP5) *A. thaliana* epithiospecifier protein (ESP) homologues that promote simple nitrile, but not epithionitrile or thiocyanate formation.

UniProt Gene Name

NSP1

UniProt Synonym Gene Names

JAL28; AtNSP1

UniProt Protein Name

Nitrile-specifier protein 1

UniProt Synonym Protein Names

Jacalin-related lectin 28

UniProt Primary Accession

Q9SDM9

UniProt Secondary Accession

O04317; Q0WNW3; Q8LB83; B9DHB6

UniProt Related Accession

Q9SDM9

UniProt Comments

Responsible for constitutive and herbivore-induced simple nitrile formation. Promotes simple nitriles, but not epithionitrile or thiocyanate formation. Converts allylglucosinolate, 4-methylsulfinylbutylglucosinolate, 4-methylthiobutylglucosinolate and benzylglucosinolate to their corresponding simple nitriles in the presence of myrosinase.

FOR RESEARCH OR FURTHER MANUFACTURING USE ONLY