

Regulatory protein NPR1 (NPR1), Recombinant Protein

Cat *RP01334*

Species

Arabidopsis thaliana (Mouse-ear cress)

Full Product Name

Recombinant *Arabidopsis thaliana* Regulatory protein NPR1 (NPR1) , partial

Product Gene Name

NPR1 recombinant protein

Purity

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

Format

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

Host

E Coli or Yeast or Baculovirus or Mammalian Cell

Molecular Weight

66,032 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

Regulatory protein

NCBI Accession

NP_176610.1

NCBI GI

15222657

NCBI GenBank Nucleotide

NM_105102.3

NCBI GeneID

842733

NCBI Official Full Name

regulatory protein (NPR1)

NCBI Official Symbol

NPR1

NCBI Official Synonym Symbols

ARABIDOPSIS NONEXPRESSER OF PR GENES 1; ATNPR1; F15H21.6; F15H21_6; NIM1; NON-INDUCIBLE IMMUNITY 1; NONEXPRESSER OF PR GENES 1; REGULATORY PROTEIN NPR1; SAI1; SALICYLIC ACID INSENSITIVE 1

FOR RESEARCH OR FURTHER MANUFACTURING USE ONLY

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NCBI Protein Information

regulatory protein (NPR1)

NCBI Summary

This gene is a key regulator of the salicylic acid (SA)-mediated systemic acquired resistance (SAR) pathway. It is similar to the transcription factor inhibitor I kappa B, and contains ankyrin repeats. It confers resistance to the pathogens *Pseudomonas syringae* and *Peronospora parasitica* in a dosage-dependent fashion. Although transgenic *Arabidopsis* plants overexpressing NPR1 acquire enhanced sensitivity to SA and (benzothiadiazole) BTH, they display no obvious detrimental morphological changes and do not have elevated pathogenesis-related gene expression until activated by inducers or pathogens.

UniProt Gene Name

NPR1

UniProt Synonym Gene Names

NIM1; SAI1; Nim1; Sai1

UniProt Protein Name

Regulatory protein NPR1

UniProt Synonym Protein Names

BTB/POZ domain-containing protein NPR1; Non-inducible immunity protein 1; Nim1; Nonexpresser of PR genes 1; Salicylic acid insensitive 1; Sai1

UniProt Primary Accession

P93002

UniProt Secondary Accession

O04742

UniProt Related Accession

P93002

UniProt Comments

May act as a substrate-specific adapter of an E3 ubiquitin-protein ligase complex (CUL3-RBX1-BTB) which mediates the ubiquitination and subsequent proteasomal degradation of target proteins. Key positive regulator of the SA-dependent signaling pathway that negatively regulates JA-dependent signaling pathway. Mediates the binding of TGA factors to the as-1 motif found in the pathogenesis-related PR-1 gene, leading to the transcriptional regulation of the gene defense. Controls the onset of systemic acquired resistance (SAR). Upon SAR induction, a biphasic change in cellular reduction potential occurs, resulting in reduction of the cytoplasmic oligomeric form to a monomeric form that accumulates in the nucleus and activates gene expression. Phosphorylated form is target of proteasome degradation.

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