

Lysine-specific demethylase REF6 (REF6), Recombinant Protein

Cat RP01362

Size 0.05 mg (E-Coli)/ 0.05 mg (Yeast)/ 0.05 mg (Baculovirus)/ 0.2 mg (E-Coli)/ 0.5 mg (E-Coli)/ 0.2 mg (Yeast)/ 0.05 mg

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

Full Product Name

Recombinant Arabidopsis thaliana Lysine-specific demethylase REF6 (REF6) , partial

Product Gene Name

REF6 recombinant protein

Product Synonym Gene Name

REF6

Purity

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

Sequence

LPVAPEFRPT LAEFQDPIAY ILKIEEEASR YGICKILPPL PPSKKTSS NLNRS LAARA AARVRDGGFG
ACDYDGGPTF ATRQQQIGFC PRKQRPVQRP VWQSGEEYSF GEFEFKAKNF EKNYLKKCGK KSQLSALEIE
TLYWRATVDK PFSVEYANDM PGSAPIPLSL AAARRRESGG EGGTVGETAW NMRAMSRAEG SLLKFMKEEI
PGVTSPMVVYV AMMF SWFAWH VEDHDLHSLN YLHMGAGKTW YGVPKDAALA FEEVVRVHGY GEELNPLVTF
STLGEKTTVM SPEVFKAGI PCCRLVQNPGEFVVTFFGAY HSGFSGHGFNF GEASNIATPE WLRMAKDAAI
RRAAIN

Sequence Positions

17-372. Partial

Format

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

Host

E Coli or Yeast or Baculovirus or Mammalian Cell

Molecular Weight

152,629 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

Lysine-specific demethylase

NCBI Accession

NP_680116.2

NCBI GI

79586698

NCBI GenBank Nucleotide

NM_148863.4

FOR RESEARCH OR FURTHER MANUFACTURING USE ONLY

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Size 0.05 mg (E-Coli)/ 0.05 mg (Yeast)/ 0.05 mg (Baculovirus)/ 0.2 mg (E-Coli)/ 0.5 mg (E-Coli)/ 0.2 mg (Yeast)/ 0.05 mg

(Mammalian-Cell)/ 0.1 mg (Baculovirus)/ 0.5 mg (Yeast)/ 1 mg (E-Coli)/ 0.5 mg (Baculovirus)/ 0.1 mg (Mammalian-Cell)/ 1 mg (Yeast)/ 1 mg (B

NCBI GeneID

824002

NCBI Official Full Name

relative of early flowering 6

NCBI Official Symbol

REF6

NCBI Official Synonym Symbols

JMJ12; Jumonji domain-containing protein 12; relative of early flowering 6

NCBI Protein Information

relative of early flowering 6

NCBI Summary

Relative of Early Flowering 6 (REF6) encodes a Jumonji N/C and zinc finger domain-containing protein that acts as a positive regulator of flowering in an FLC-dependent pathway. REF6 mutants have hyperacetylation of histone H4 at the FLC locus. REF6 interacts with BES1 in a Y2H assay and in vitro. REF6 may play a role in brassinosteroid signaling by affecting histone methylation in the promoters of BR-responsive genes. It is most closely related to the JHDM3 subfamily of JmjN/C proteins.

UniProt Gene Name

REF6

UniProt Protein Name

Lysine-specific demethylase REF6

UniProt Synonym Protein Names

Jumonji domain-containing protein 12

UniProt Primary Accession

Q9STM3

UniProt Related Accession

Q9STM3

UniProt Comments

Histone demethylase that demethylates 'Lys-27' (H3K27me) of histone H3. Demethylates both tri- (H3K27me3) and di-methylated (H3K27me2) H3K27me (PubMed:21642989, PubMed:27111035). Demethylates also H3K4me3/2 and H3K36me3/2 in an in vitro assay (PubMed:20711170). Involved in the transcriptional regulation of hundreds of genes regulating developmental patterning and responses to various stimuli (PubMed:18467490). Binds DNA via its four zinc fingers in a sequence-specific manner, 5'-CTCTGYTY-3', to promote the demethylation of H3K27me3 and the regulation of organ boundary formation (PubMed:27111034, PubMed:27111035). Involved in the regulation of flowering time by repressing FLOWERING LOCUS C (FLC) expression (PubMed:15377760). Interacts with the NF-Y complex to regulate SOC1 (PubMed:25105952). Mediates the recruitment of BRM to its target loci (PubMed:27111034).

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