

Transcription factor EGL1 (BHLH2), Recombinant Protein

Cat *RP05116*

Species

Arabidopsis thaliana (Mouse-ear cress)

Full Product Name

Recombinant *Arabidopsis thaliana* Transcription factor EGL1 (BHLH2) , partial

Product Gene Name

BHLH2 recombinant protein

Product Synonym Gene Name

BHLH2

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

66,620 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

Transcription factor

NCBI Accession

NP_001185302.1

NCBI GI

334183608

NCBI GenBank Nucleotide

NM_001198373.2

NCBI GeneID

842669

NCBI Official Full Name

basic helix-loop-helix (bHLH) DNA-binding superfamily protein

NCBI Official Symbol

EGL3

NCBI Official Synonym Symbols

FOR RESEARCH OR FURTHER MANUFACTURING USE ONLY

Transcription factor EGL1 (BHLH2), Recombinant Protein

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AtEGL3; ATMYC-2; EGL1; ENHANCER OF GLABRA 3; F24D7.16; F24D7_16

NCBI Protein Information

basic helix-loop-helix (bHLH) DNA-binding superfamily protein

NCBI Summary

Mutant has reduced trichomes, anthocyanin, and seed coat mucilage and abnormally patterned stomates. Encodes a bHLH Transcription Factor 1. The protein is functionally redundant with GL3 and TT8 and interacts with TTG1, the myb proteins GL1, PAP1 and 2, CPC and TRY, and it will form heterodimers with GL3. Expression in N (non-hair cell forming) cell layers is negatively regulated by WER. Expression in H cells (hair cell forming) is promoted by CPC/TRY.

UniProt Gene Name

BHLH2

UniProt Synonym Gene Names

EGL1; EGL3; EN30; MYC146; AtMYC146; AtbHLH2; bHLH 2

UniProt Protein Name

Transcription factor EGL1

UniProt Synonym Protein Names

Basic helix-loop-helix protein 2; AtMYC146; AtbHLH2; bHLH 2; Protein ENHANCER OF GLABRA 3; Transcription factor EN 30; bHLH transcription factor bHLH002

UniProt Primary Accession

Q9CAD0

UniProt Secondary Accession

O22418

UniProt Related Accession

Q9CAD0

UniProt Comments

Transcription activator, when associated with MYB75/PAP1, MYB90/PAP2 or TT2. Involved in epidermal cell fate specification. Regulates negatively stomata formation but promotes trichome formation. Together with MYB66/WER, promotes the formation of non-hair cells in root epidermis cells in the N position. Whereas together with CPC, promotes the formation of hair cells in root epidermis cells in the H position by inhibiting non-hair cell formation. Seems also to play a role in the activation of anthocyanin biosynthesis, probably together with MYB75/PAP1. Involved in seed mucilage production. Activates the transcription of GL2.

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