

Recombinant Arabidopsis Thaliana DML1 Protein (1-320 aa), His-SUMO-tagged

Cat. No. DML1-2008A **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Arabidopsis Thaliana (Mouse-ear cress) DML1 Protein (1-320 aa) is produced by E. coli expression system. This protein is fused with a 6xHis-SUMO tag at the N-terminal. Research Area: Epigenetics and Nuclear Signaling. Protein Description: Partial.
Species	Arabidopsis Thaliana
Source	E.coli
ProteinLength	1-320 aa
Description	Bifunctional DNA glycosylase/lyase, which excises 5-methylcytosine (5-meC) and 5-hydroxymethylcytosine (5-hmeC), leaving an apyrimidinic (AP) site that is subsequently incised by the lyase activity (PubMed:25240767). Generates 3'-phosphor-alpha,beta-unsaturated aldehyde (3'-PUA) as a primary 5-meC excision intermediate (PubMed:25228464). Prevents DNA hypermethylation, specifically in the promoter of otherwise silenced loci. May be involved in DNA repair through its nicking activity on methylated DNA. Binds with similar affinity to both methylated and non-methylated DNA. Highly distributive behavior on DNA substrates containing multiple 5-meC residues. Involved with Pol IV in the remodeling of the 5S rDNA chromatin via DNA methylation modifications during the first days of development post-germination. Participates in UV-B induced- and oxidative DNA damage repair (PubMed:24155752).

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Form	Tris-based buffer,50% glycerol
Molecular Mass	52.3 kDa
AA Sequence	MEKQRREESSFQQPPWIPQTPMKPFSPICPYTVEDQYHSSQLEERRFVGNKDMSG LDHLSFGDLLALANTASLIFSGQTPIPTRNTEVMQKGTEEVESLSSVSNNVAEQILKT PEKPKRKKHRPKVRREAKPKREPKPRAPRKS SVTDGQESKTPKRKYVRKKVEVSK DQDATPVESSAAVETSTRPKRLCRRVLDFAENGENTNGDIREAGEMESALQEKQ LDSGNQELKDCLLSAPSTPKRKRSQGKRKGVQPKKNGSNLEEVDISMAQAAKRRQ GPTCCDMNLSGIQYDEQCDYQKMHWLYSPNLQQGGMRYDAI
Purity	> 90% as determined by SDS-PAGE.
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4 centigrade for up to one week.
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20 centigrade/-80 centigrade. The shelf life of lyophilized form is 12 months at -20 centigrade/-80 centigrade.
Concentration	A hardcopy of COA with reconstitution instruction is sent along with the products.

GENE INFORMATION

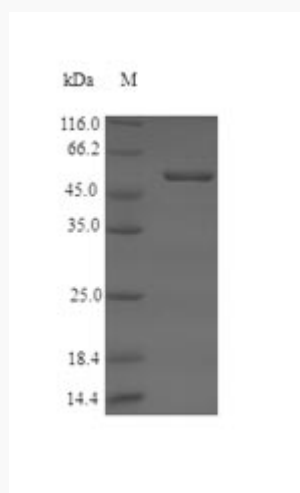
Gene Name	DML1 demeter-like 1 [<i>Arabidopsis thaliana</i> (thale cress)]
Official Symbol	DML1
Synonyms	AtROS1; demeter-like 1; F1O11.12; F1O11_12; REPRESSOR OF SILENCING1; ROS1;

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Gene ID	818224
mRNA Refseq	NM_129207
Protein Refseq	NP_181190
UniProt ID	Q9SJQ6



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

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