

Recombinant Human SMYD1 Protein, His/SUMO-tagged

Cat. No. SMYD1-005H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human SMYD1 protein (2-490 with a N-terminal His-SUMO-tag was expressed in E. coli.
Species	Human
Source	E.coli
ProteinLength	2-490
Description	The SET and MYND domain (SMYD) containing family of proteins is made up of SMYDs, all of which have a distinctive SET domain which is split by a MYND domain. The SET domain is responsible for methyltransferase activity, whereas the MYND domain is a zinc finger that facilitates protein-protein interactions with specific proline-rich sequences. The SMYDs also contain a novel C-terminal domain (CTD) that helps to regulate histone methylation. 1 SMYD activity and specificity can be significantly stimulated by the binding of heat shock protein 90 (Hsp90), which is thought to cause the CTD to swing out, thereby fully exposing the active site. SMYD1 is a cardiac and muscle-specific histone methyltransferase, specifically methylating H3K4 and is crucial for cardiomyocyte differentiation and maturation. SMYD1 has been found to be up-regulated in patients with end-stage heart failure, and may also contribute to irregular heartbeat rhythm.
Molecular Mass	69.6 kDa
Purity	≥50% estimated by SDS-PAGE

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Stability ≥ 9 months

Storage -80 centigrade

GENE INFORMATION

Gene Name SMYD1 SET and MYND domain containing 1 [Homo sapiens (human)]

Official Symbol SMYD1

Synonyms SMYD1; SET and MYND domain containing 1; BOP; KMT3D; ZMYND18; ZMYND22; histone-lysine N-methyltransferase SMYD1; CD8 beta opposite; SET and MYND domain-containing protein 1; zinc finger, MYND domain containing 18; EC 2.1.1.354

Gene ID 150572

mRNA Refseq NM_198274

Protein Refseq NP_938015

MIM 606846

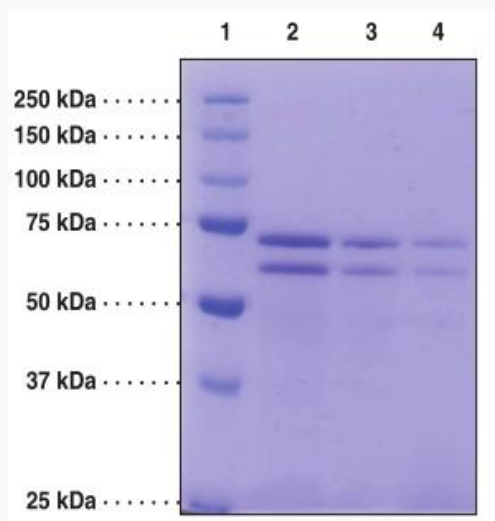
UniProt ID Q8NB12

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SDS-PAGE Analysis of SMYD1



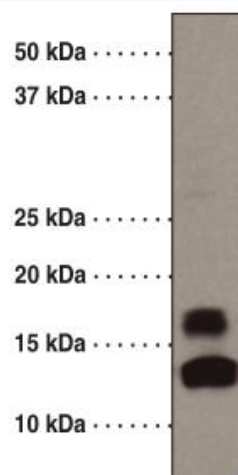
Lane 1: MW Markers

Lane 2: SMYD1 (5 µg)

Lane 3: SMYD1 (2.5 µg)

Lane 4: SMYD1 (1.25 µg)

Analysis of SMYD1



Fluorograph of nucleosomes separated on SDS-PAGE following an overnight reaction at 20 centigrade with [3H]-SAM and 2 μ M SMYD1.

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