

Recombinant Human SETD3 Protein, His-tagged

Cat. No. SETD3-01H Lot. No. (See product label)

SPECIFICATION

Product Overview Recombinant human SETD3 protein (2-594) with a N-terminal His-tag was expressed in E. coli.

Species Human

Source E.coli

ProteinLength 2-594

Description

SET domain protein 3 (SETD3) is an actin histidine methyltransferase encoded by the SETD3 gene in humans and a member of the SET family of methyltransferases. It contains an N-terminal SET domain, responsible for transferring a methyl group from S-adenosyl methionine to histidine 73 on β -actin, that forms a cleft with a C-terminal domain that is similar to large subunit methyltransferase (LSMT) domains. SETD3 is ubiquitously expressed and localizes to the cytoplasm. SETD3 expression in liver cancer cell lines increases proliferation while shRNA knockdown decreases it. Expression of SETD3 increases tumor size in a HepG2 mouse xenograft model, and a xenograft model using cancer cells with an endogenous knockdown of SETD3 reduces tumor size. SETD3 protein levels are increased in isolated human cancer tissues compared with adjacent tissue. Setd3 knockout in mice leads to skeletal muscle myopathy, abnormal cardiac electrocardiogram, and, in female mice, delayed parturition.

Form 50 mM HEPES, pH 8.0, with 150 mM sodium chloride and 10% glycerol

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Molecular Mass	69.2 kDa
Purity	≥80% estimated by SDS-PAGE
Unit Definition	nmol/min/mg. One unit is defined as the amount of enzyme required to transfer one methyl group to actin peptide per minute using 8 μ M actin peptide (LKYPPIEHGIVTNWDDMEKIW-amide) at 37 centigrade in our Methyltransferase Colorimetric Assay Kit.
Applications	WB, ELISA, Enzymatic Assay
Stability	≥ 1 year
Storage	Store at -80 centigrade

GENE INFORMATION

Gene Name	SETD3 SET domain containing 3, actin histidine methyltransferase [Homo sapiens (human)]
Official Symbol	SETD3
Synonyms	SETD3; SET domain containing 3, actin histidine methyltransferase; hSETD3; C14orf154; actin-histidine N-methyltransferase; SET domain containing 3; SET domain-containing protein 3; histone-lysine N-methyltransferase setd3
Gene ID	84193
mRNA Refseq	NM_032233
Protein Refseq	NP_115609

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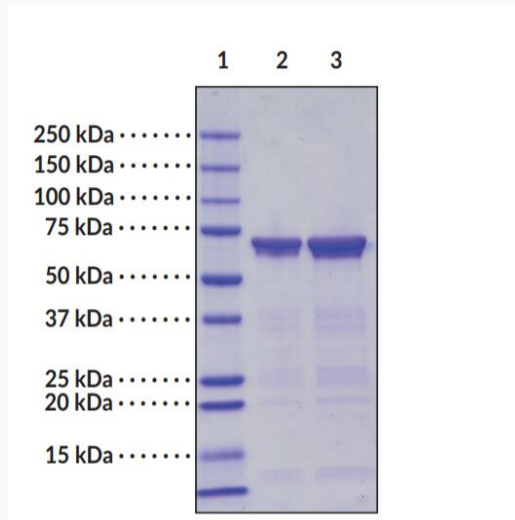
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MIM 615671

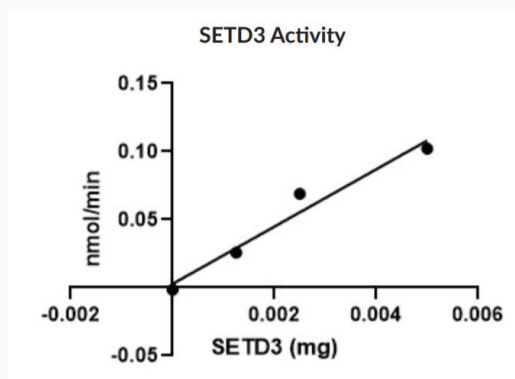
UniProt ID Q86TU7

**SDS-PAGE Analysis
of SETD3**



Lane 1: MW Markers, Lane 2: SETD3 (2 g), Lane 3: SETD3 (4 g), Figure 1: SDS-PAGE Analysis of SETD3: Representative gel image shown; actual purity may vary between each batch.

Activity Assay



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SETD3 activity was determined using our Methyltransferase Colorimetric Assay Kit.

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