

# PRODUCT INFORMATION



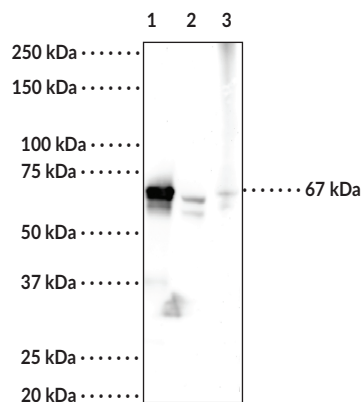
## SETD3 Monoclonal Antibody (Clone 1B4)

Item No. 29208

### Overview and Properties

<b>Contents:</b>	This vial contains 100 µg of protein G-purified monoclonal antibody
<b>Synonyms:</b>	Actin Histidine N-Methyltransferase, C14orf154, Chromosome 14 Open Reading Frame 154, HSETD3, SET Domain-containing 3, Actin Histidine Methyltransferase, SET Domain-containing Protein 3
<b>Immunogen:</b>	Full-length recombinant human SETD3 protein
<b>Uniprot No.:</b>	Q86TU7
<b>Form:</b>	Liquid
<b>Storage:</b>	-20°C (as supplied)
<b>Stability:</b>	≥3 years
<b>Storage Buffer:</b>	PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
<b>Clone:</b>	1B4
<b>Host:</b>	Mouse
<b>Isotype:</b>	IgG1
<b>Applications:</b>	ELISA and Western Blot; the recommended starting dilution is 1:1,000. Other applications were not tested, therefore, optimal working concentration/dilution should be determined empirically.

### Image(s)



Lane 1: SETD3 recombinant protein (50 ng)  
Lane 2: MCF7 cell lysate (30 µg)  
Lane 3: Jurkat cell lysate (50 µg)

WARNING  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY  
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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## Description

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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.<sup>1</sup> It contains an N-terminal SET domain, responsible for transferring a methyl group from S-adenosyl methionine to histidine 73 on  $\beta$ -actin, that forms a cleft with a C-terminal domain that is similar to large subunit methyltransferase (LSMT) domains.<sup>2</sup> SETD3 is ubiquitously expressed and localizes to the cytoplasm. *SETD3* overexpression in liver cancer cell lines increases proliferation while shRNA knockdown decreases it.<sup>1</sup> Overexpression 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.<sup>2</sup> Cayman's SETD3 Monoclonal Antibody (Clone 1B4) can be used for ELISA and Western blot applications. The antibody recognizes SETD3 at 67 kDa from human samples.

## References

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1. Cheng, X., Hao, Y., Shu, W., *et al.* Cell cycle-dependent degradation of the methyltransferase SETD3 attenuates cell proliferation and liver tumorigenesis. *J. Biol. Chem.* **292**(22), 9022-9033 (2017).
2. Wilkinson, A.W., Diep, J., Dai, S., *et al.* SETD3 is an actin histidine methyltransferase that prevents primary dystocia. *Nature* **585**(7739), 372-376 (2019).

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