

ZMYND11/BS69 (E7P9O) Rabbit mAb

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, ChIP, ChIP-seq, C&R, C&T	H M R Mk	Endogenous	74, 64	Rabbit IgG	#Q15326	10771

Product Usage Information

For optimal ChIP and ChIP-seq results, use 10 µl of antibody and 10 µg of chromatin (approximately 4 x 10⁶ cells) per IP. This antibody has been validated using SimpleChIP® Enzymatic Chromatin IP Kits.

The CUT&RUN dilution was determined using CUT&RUN Assay Kit #86652.

The CUT&Tag dilution was determined using CUT&Tag Assay Kit #77552.

Application	Dilution
Western Blotting	1:1000
Chromatin IP	1:50
Chromatin IP-seq	1:50
CUT&RUN	1:100
CUT&Tag	1:100

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. *Do not aliquot the antibody.*

Specificity/Sensitivity

ZMYND11/BS69 (E7P9O) Rabbit mAb recognizes endogenous levels of total ZMYND11/BS69 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro430 of human ZMYND11/BS69 protein.

Background

ZMYND11, also commonly referred to as BS69, is a ubiquitous chromatin reader protein that recognizes tri-methyl histone H3 lysine 36 (H3K36me3) and acts as a transcriptional repressor. It contains several domains associated with chromatin reader proteins, including an N-terminal PHD finger, a bromodomain, a PWWP domain, and a C-terminal MYND domain (1), and it shares a similar domain organization with its homolog protein ZMYND8/RACK7 (2). ZMYND11 specifically recognizes and binds to H3K36me3 modification sites on histone variant H3.3 (but not H3.1 nor H3.2), and modulates RNA Polymerase II-mediated elongation (3). ZMYND11 colocalizes with areas of high gene expression and associates with transcription factors such as E1A, MGA, Ets-2, c-Myb, and B-Myb (4). Due to its ability to repress oncogene expression, ZMYND11 is considered to be a tumor suppressor and is found to be downregulated, mutated, translocated, and show copy number variations in many types of cancer. Low levels of ZMYND11 correlate with poor prognosis in breast cancer, whereas its overexpression suppresses cancer cell growth *in vivo* and tumor formation in mice (3). Translocation of ZMYND11-MBTD1 is associated with acute myeloid leukemia (AML) (5-6). Copy number variations have been associated with multiple hematological disorders, including AML, acute lymphoblastic leukemia (ALL), and multiple myeloma (MM), among others (7). Translocations and mutations of ZMYND11 have also been found to be associated with autism and other neuropsychiatric and intellectual disabilities (7).

Background References

1. Wang, J. et al. (2014) *Cell Res* 24, 890-3.
2. Ansieau, S. and Sergeant, A. (2003) *Pathol Biol (Paris)* 51, 397-9.
3. Wen, H. et al. (2014) *Nature* 508, 263-8.
4. Velasco, G. et al. (2006) *J Biol Chem* 281, 16546-50.
5. De Braekeleer, E. et al. (2014) *Leuk Lymphoma* 55, 1189-90.
6. Yamamoto, K. et al. (2018) *Leuk Lymphoma*, 1-5.
7. Yang, H. et al. (2010) *Ann Hematol* 89, 959-64.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **ChIP:** Chromatin IP **ChIP-seq:** Chromatin IP-seq **C&R:** CUT&RUN **C&T:** CUT&Tag

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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