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Store at -20C
#5695

HECTH9 (AX8D1) Mouse mAb

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W	Reactivity: H M R Mk	Sensitivity: Endogenous	MW (kDa): 482	Source/Isotype: Mouse IgG1	UniProt ID: #Q7Z6Z7	Entrez-Gene Id: 10075
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Product Usage Information

Application

Western Blotting

Dilution

1:1000

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

HECTH9 (AX8D1) Mouse mAb recognizes endogenous levels of total HECTH9 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a recombinant protein specific to human HECTH9 protein.

Background

The HECT domain-containing ubiquitin E3 ligase HECTH9 (also known as HUWE1, ARF-BP1, URE-B1, Mule, and LASU1) is critical for the ubiquitination and proteasomal degradation of many target proteins, and is involved in the regulation of a variety of cellular processes, including DNA replication and base excision repair, cellular proliferation, differentiation, and apoptosis. HECTH9 contains two Armadillo (ARM) repeat-like domains (ARLD1 and ARLD2), a ubiquitin-associated (UBA) domain, a WWE domain, a well-conserved BH3 domain, and a catalytic HECT domain that facilitates ubiquitination of target proteins. HECTH9 has been shown to polyubiquitinate p53 (1,2), Miz1 (3), N-Myc (4,5), Mcl-1 (6), Cdc 6 (7), and DNA polymerase beta (8) through K48-mediated linkage, thereby targeting these proteins for proteasomal degradation. The tumor suppressor protein ARF (known as p14 ARF in humans and p19 ARF in mice) binds to and inhibits the ubiquitin ligase activity toward p53, resulting in stabilization of p53 and induction of apoptosis (1). HECTH9 has also been shown to polyubiquitinate c-Myc through K63-linkage, which is required for recruitment of p300, activation of c-Myc target genes, and induction of cellular proliferation (9). HECTH9 is overexpressed in colon, lung, and breast cancer (1,9). In addition, defects in HECTH9 result in mental retardation syndromic X-linked Turner type (MRXST) and mental retardation X-linked type 17 (MRX17) syndromes (10).

Background References

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- Yoon, S.Y. et al. (2005) *Biochem Biophys Res Commun* 326, 7-17.
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- Zhao, X. et al. (2008) *Nat Cell Biol* 10, 643-53.
- Zhao, X. et al. (2009) *Dev Cell* 17, 210-21.
- Zhong, Q. et al. (2005) *Cell* 121, 1085-95.
- Hall, J.R. et al. (2007) *Mol Biol Cell* 18, 3340-50.
- Parsons, J.L. et al. (2009) *EMBO J* 28, 3207-15.
- Adhikary, S. et al. (2005) *Cell* 123, 409-21.
- Froyen, G. et al. (2008) *Am J Hum Genet* 82, 432-43.

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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

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

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