

**AHCYL1/IRBIT (D3A5G) Rabbit mAb**

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<b>Applications:</b> W, IP	<b>Reactivity:</b> H M R Mk	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 61	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #O43865	<b>Entrez-Gene Id:</b> 10768
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**Product Usage Information****Application**

Western Blotting  
Immunoprecipitation

**Dilution**

1:1000  
1:50

**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**

AHCYL1/IRBIT (D3A5G) Rabbit mAb recognizes endogenous levels of total AHCYL1/IRBIT protein. This antibody does not cross-react with AHCYL2/IRBIT2 protein.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Glu50 of human AHCYL1/IRBIT protein.

**Background**

S-adenosylhomocysteine hydrolase-like protein 1 (AHCYL1) is a member of S-adenosylhomocysteine hydrolase family, which participates in the metabolism of S-adenosyl-L-homocysteine (1). Two *Drosophila* homologs of S-adenosylhomocysteine hydrolase-like proteins, dAhcyl1 and dAhcyl2, were identified as novel components of methionine metabolism (2). dAhcyl1 and dAhcyl2 function as dominant-negative regulators of S-adenosylhomocysteine hydrolase (2). Global down-regulation of both dAhcyl1 and dAhcyl2 extended life span (2). In addition, brain-specific down regulation of dAhcyl1 extended life span (2). AHCYL1 is also known as inositol 1,4,5-trisphosphate receptor (IP<sub>3</sub>R) binding protein released with IP<sub>3</sub> (IRBIT) (1, 3). This protein binds to the endoplasmic reticulum calcium release channel IP<sub>3</sub>R and represses its activity (1, 3). As a multifunctional regulator, AHCYL1/IRBIT can also form a complex with and suppress the activity of ribonucleotide reductase, thereby influencing the balance of deoxynucleotide triphosphates essential for DNA replication and genomic integrity (4).

**Background References**

1. Jeong, W. et al. (2012) *PLoS One* 7, e49204.
2. Parkhitko, A.A. et al. (2016) *Genes Dev* 30, 1409-22.
3. Kawaai, K. et al. (2015) *Proc Natl Acad Sci U S A* 112, 5515-20.
4. Arnaoutov, A. and Dasso, M. (2014) *Science* 345, 1512-5.

**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 **IP:** Immunoprecipitation

**Cross-Reactivity Key**

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

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