

Store at
-20C
#13557**Mios (D12C6) Rabbit mAb**
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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene ID:
W, IP	H M R	Endogenous	98	Rabbit IgG	#Q9NXC5	54468

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

Mios (D12C6) Rabbit mAb recognizes endogenous levels of total Mios protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu730 of human Mios protein.

Background

The mTORC1 kinase complex plays a critical role in cell growth regulation (1,2). mTORC1 activity is modulated by energy levels, growth factors, and amino acids (3,4). Four related GTPases (RagA, RagB, RagC, and RagD) interact with raptor in mTORC1, which is necessary and sufficient for mTORC1 activation in response to amino acid signals (1,2). The GAP Activity Towards Rags (GATOR) complex interacts with Rag GTPases and is made up of a pair of protein subcomplexes (5). The GATOR1 subcomplex includes the proteins DEPDC5, Nprl2 and Nprl3, and is a RagA and RagB GTPase-activating protein (GAP) that negatively regulates mTORC1 signaling. Conversely, the GATOR2 subcomplex (including Mios, WDR24, WDR59, Seh1L and Sec13 proteins) is a positive regulator of mTORC1 signaling (5).

The mammalian Mios protein contains six amino-terminal WD repeats and a carboxy terminal zinc finger-like domain. The homologous *Drosophila* missing oocyte (Mio) protein is required for meiotic progression and oocyte cell fate maintenance during development (6).

Background References

1. Sancak, Y. et al. (2008) *Science* 320, 1496-501.
2. Kim, E. et al. (2008) *Nat Cell Biol* 10, 935-45.
3. Hay, N. and Sonenberg, N. (2004) *Genes Dev* 18, 1926-45.
4. Wullschlegel, S. et al. (2006) *Cell* 124, 471-84.
5. Bar-Peled, L. et al. (2013) *Science* 340, 1100-6.
6. Iida, T. and Lilly, M.A. (2004) *Development* 131, 1029-39.

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**Trademarks and Patents**

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