

#8665 Store at -20°C

## Rag and LAMTOR Antibody Sampler Kit

1 Kit (7 x 20 microliters)



**Cell Signaling**  
TECHNOLOGY®

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

Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
LAMTOR1/C11orf59 (D11H6) XP® Rabbit mAb	8975	20 µl	18 kDa	Rabbit IgG
LAMTOR2/ROBLD3 (D7C10) Rabbit mAb	8145	20 µl	14 kDa	Rabbit IgG
LAMTOR3/MAPKSP1 (D38G5) Rabbit mAb	8168	20 µl	14 kDa	Rabbit IgG
RagA (D8B5) Rabbit mAb	4357	20 µl	30 kDa	Rabbit IgG
RagC (D8H5) Rabbit mAb	9480	20 µl	50 kDa	Rabbit IgG
RagB (D18F3) Rabbit mAb	8150	20 µl	40 kDa	Rabbit IgG
RagD Antibody	4470	20 µl	50 kDa	Rabbit
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat

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### Description

The Rag and LAMTOR Antibody Sampler Kit is an economical means of detecting various Rag and LAMTOR proteins implicated within mTOR complex signaling. The kit contains enough primary and secondary antibody to perform two western blots with each antibody.

### 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.

### Background

The mTORC kinase complex is a critical regulator of cell growth (1,2). Its activity is modulated by energy levels, growth factors, and amino acids via signaling through Akt, MAPK, and AMPK pathways (3,4). Recent studies found that the four related GTPases, RagA, RagB, RagC, and RagD, interact with raptor within the mTORC1 complex (1,2). These interactions are both necessary and sufficient for mTORC1 activation in response to amino acid signals (1,2). According to the research literature, RagD is one of several genes differentially expressed in human melanoma cell lines and has been considered to be a viable target for further diagnostic and therapeutic study (5). A protein complex consisting of LAMTOR1/C11orf59, LAMTOR2/ROBLD3, and LAMTOR3/MAPKSP1 has been identified to interact with and recruit four Rag GTPases to the surface of lysosomes (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. de Wit, N.J. et al. (2005) *Br J Cancer* 92, 2249-61.
6. Sancak, Y. et al. (2010) *Cell* 141, 290-303.

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