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Product Information

Anti-Rubicon antibody
Mouse monoclonal, Clone RB-145
purified from hybridoma cell culture

Product Number **SAB4200838**

Product Description

Monoclonal Anti-Rubicon antibody (mouse IgG1 isotype) is derived from the RB-145 hybridoma, produced by the fusion of mouse myeloma cells and splenocytes from a mouse immunized with a synthetic peptide corresponding to the N-terminal region of human Rubicon (GeneID: 9711), conjugated to KLH as immunogen. The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents (Product Number ISO2). The antibody is purified from culture supernatant of hybridoma cells.

Monoclonal Anti-Rubicon antibody specifically recognizes Rubicon from human origin. The antibody may be used in various immunochemical techniques including immunoblotting and immunofluorescence. Detection of the Rubicon band by immunoblotting is specifically inhibited by the immunogen.

Run domain Beclin-1-interacting and cysteine-rich domain-containing protein (Rubicon) also known as Beclin-1 associated RUN domain containing protein (Baron) or KIAA0226, is a negative regulator of endosomes maturation and endocytic trafficking.[1-2] Rubicon knockdown studies showed enhanced autophagosome maturation and endocytosis.[1] It also has a critical role in the LC-3 associated phagocytosis (LAP), a noncanonical autophagy process which can be induced through the activation of an extracellular receptor by different stimulators including pathogens, immune complexes, and dying cells.[4-5]

The mammalian class III phosphatidylinositol 3-kinase (PtdIns3K) complex consists of three core proteins, catalytic VPS34, the adaptor VPS15 (p150), and the recruiter Beclin-1 (ATG6). These endocytosis regulators were reported to stably bind Beclin-1 ATG14, UVRAG, and Rubicon.[1-3] The complex Rubicon-UVRAG–Beclin-1/PtdIns3K can be found both in early and in late endosomes or lysosomes. Rubicon was described as the mediator for the recruitment of the UVRAG-Beclin-1-VPS34 complex and of ATG7 and LC3-II LAPosome.[4-5]

Furthermore, Rubicon has been identified as a key modulator of the inflammatory response and viral replication, during several viral infections such as hepatitis B virus (HBV). Rubicon expression is induced in negative regulation of the innate immune response resulting in enhances viral replication and possibly supporting viral immune evasion mechanism.[4-6]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: ~1.0 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 2-4 μg/mL is recommended using a human A431 whole cell extract.

Immunofluorescence: a working concentration of 2-4 μg/mL is recommended using human HeLa cells.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration test.

References

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3. Zhong, Y., et al., *Nat. Cell Biol.*, **11**, 468-76 (2009).
4. Wong, S.W., et al., FEBS J., **285**, 1379-1388 (2018).
5. Martinez, J., et al., *Nat. Cell Biol.*, **17**, 893-906 (2015).
6. Wan, Y., et al., *Cell Mol. Immunol.*, **14**, 607-620 (2017).

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