

**Rubicon Antibody**  
**Catalog # ASC11843****Specification****Rubicon Antibody - Product Information**

Application	WB, IHC, IF
Primary Accession	<a href="#">Q92622</a>
Other Accession	<a href="#">XP_005269431</a> , <a href="#">530375960</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	Predicted: 90, 101, 109 kDa

**Application Notes**

**Observed: 91, 99 kDa**  
Rubicon body can be used for detection of Rubicon by Western blot at 1 - 2 µg/ml. Antibody can also be used for Immunohistochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.

**Rubicon Antibody - Additional Information**

Gene ID **9711**

**Target/Specificity**

KIAA0226; Rubicon antibody is human, mouse and rat reactive. Multiple isoforms of Rubicon are known to exist.

**Reconstitution & Storage**

Rubicon antibody can be stored at 4°C for three months and -20°C, stable for up to one year.

**Precautions**

Rubicon Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Rubicon Antibody - Protein Information**

**Name** RUBCN ([HGNC:28991](#))

**Synonyms** KIAA0226

**Function**

Inhibits PI3K3 activity; under basal conditions negatively regulates PI3K complex II (PI3KC3-C2) function in autophagy. Negatively regulates endosome maturation and degradative endocytic trafficking and impairs autophagosome maturation process. Can sequester UVRAG from association with a class C Vps complex (possibly the HOPS complex) and negatively regulates Rab7 activation (PubMed:<a href="http://www.uniprot.org/citations/20974968" target="\_blank">20974968</a>, PubMed:<a href="http://www.uniprot.org/citations/21062745" target="\_blank">21062745</a>).

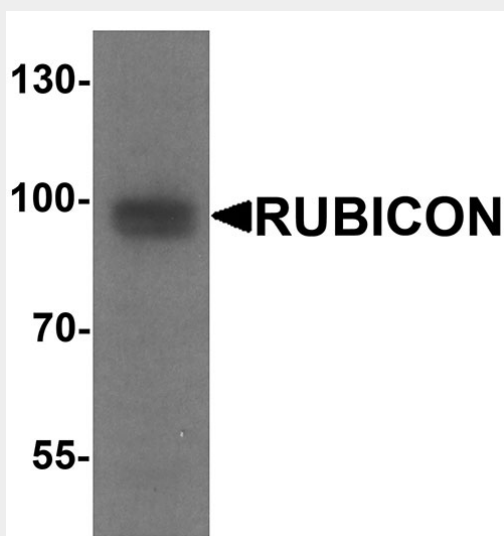
**Cellular Location**

Late endosome. Lysosome. Early endosome Note=Predominantly located in late endosomes/lysosomes, only partially detected in early endosome and not at all in the Golgi apparatus

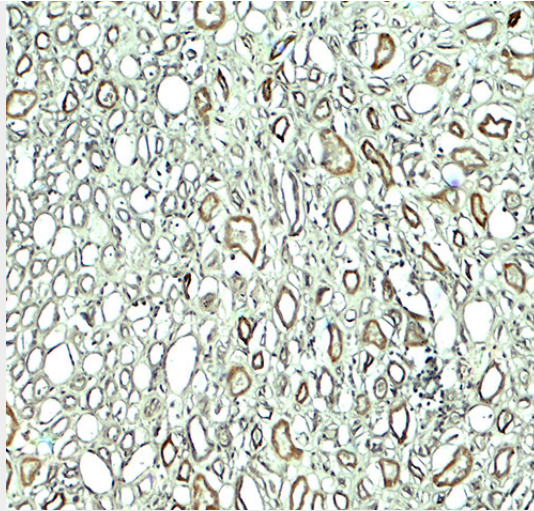
**Rubicon Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

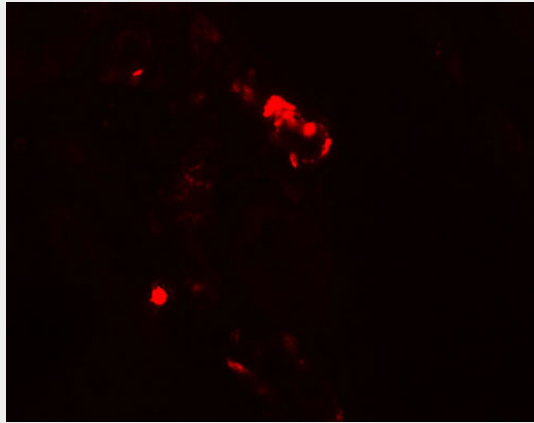
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**Rubicon Antibody - Images**

Western blot analysis of Rubicon in 293 cell lysate with Rubicon antibody at 1 µg/ml.



Immunohistochemistry of RUBICON in human kidney tissue with RUBICON antibody at 5 µg/ml.



Immunofluorescence of RUBICON in human kidney tissue with RUBICON antibody at 20 µg/ml.

### **Rubicon Antibody - Background**

Two Beclin-1-interacting proteins, the run domain Beclin-1 interacting and cysteine-rich containing protein (Rubicon) and ATG14L, reciprocally regulate autophagy at different stages. Knockdown of Rubicon caused enhancement of autophagy while that of ATG14L caused a defect in autophagosome formation (1). Rubicon functions as part of a Beclin-1-PIK3C3-containing autophagy complex and is also an essential, positive regulator of the NADPH oxidase complex (2). Upon microbial infection or TLR2 activation, Rubicon interacts with the CYBA subunit of the NADPH oxidase complex, leading to a burst of reactive oxygen species and inflammatory cytokines (2).

### **Rubicon Antibody - References**

Matsunaga K, Saitoh T, Tabata K, et al. Two Beclin 1-binding proteins, Atg14L and Rubicon, reciprocally regulate autophagy at different stages. *Nat. Cell Biol.* 2009; 11:385-96.  
Yang CS, Lee JS, Rodgers M, et al. Autophagy protein Rubicon mediates phagocytic NADPH oxidase activation in response to microbial infection of TLR stimulation. *Cell Host and Microbe* 2012; 11:264-76.