Atg4b (R97) polyclonal antibody

Catalog: BS2380 Host: Rabbit Reactivity: Human,Mouse,Rat

BackGround:

Autophagy is a catabolic process for the autophagosomic-lysosomal degradation of bulk cytoplasmic contents. Control of autophagy was largely discovered in yeast and involves proteins encoded by a set of autophagy-related genes (Atg). Formation of autophagic vesicles requires a pair of essential ubiquitin-like conjugation systems, Atg12-Atg5 and Atg8-phosphatidylethanolamine (Atg8-PE), which are widely conserved in eukaryotes. Numerous mammalian counterparts to yeast Atg proteins have been described, including three Atg8 proteins (GATE-16, GABARAP, and LC3) and four Atg4 homologs (Atg4A/autophagin-2, Atg4B/autophagin-1, Atg4C/autophagin-3, and Atg4D/autophagin-4). The cysteine protease Atg4 is pivotal to autophagosome membrane generation and regulation. Atg4 primes the Atg8 homolog for lipidation by cleaving its carboxy terminus and exposing its glycine residue for E1-like enzyme Atg7. The Atg8 homolog is transferred to the E2-like enzyme Atg3 before forming the Atg8-PE conjugate. During later stages of autophagy, Atg4 can reverse this lipidation event by cleaving PE, thereby recycling the Atg8 homolog. While Atg4B displays a broad specificity for Atg8 homologues, it preferentially cleaves LC3. Mutation in the corresponding Atg4B gene can be associated with strong inhibition of autophagosome formation. An excess of inactive Atg4B blocks lipidation of Atg8 homologues and inhibits autophagy. This makes Atg4B a potential tool for characterization of the isolation membrane and other autophagy studies.

Product:

1 mg/ml in Phosphate buffered saline (PBS) with 0.05% sodium azide, approx. pH 7.3.

Molecular Weight:

~ 44 kDa

Swiss-Prot:

Q9Y4P1

Purification&Purity:

The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen and the purity is > 95% (by SDS-PAGE).

Applications:

WB: 1:500~1:1000

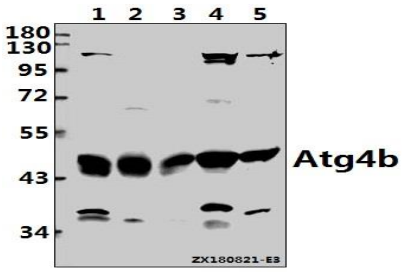
Storage&Stability:

Store at 4℃ short term. Aliquot and store at -20℃ long term. Avoid freeze-thaw cycles.

Specificity:

Atg4b pAb detects endogenous levels of Atg4b protein.

DATA:



Western blot (WB) analysis of Atg4b (R97) pAb at 1:500 dilution

Lane1:Panc1 whole cell lysate(40ug)

Lane2:The Brain tissue lysate of Mouse(30ug)

Lane3:The Brain tissue lysate of Rat(40ug)

Lane4:Hela whole cell lysate(40ug)

Lane5:A2780 whole cell lysate(40ug)

Note:

For research use only, not for use in diagnostic procedure.

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