



Autophagy Protein Detection Set

Cat. No.: PSI-1813



Ψ Specifications

SPECIES REACTIVITY:	Human
IMMUNOGEN:	Rabbit polyclonal antibodies were raised against peptides corresponding to amino acid sequences from each of the corresponding proteins.
TESTED APPLICATIONS:	IF, IHC, WB
APPLICATIONS:	These polyclonal antibodies can be used for detection of APG7, Beclin-1, LAMP1, LAMP2 and PIST by immunoblot at 1 - 2 µg/mL. APG7, Beclin-1 and PIST antibodies can detect their respective proteins via immunohistochemistry at 1 - 10 µg/mL, and Immunofluorescence.
POSITIVE CONTROL:	1) APG7 antibody: MCF7 cell lysate, Catalog No. 1219 Beclin-1 antibody: A431 cell lysate, Catalog No. 1202 LAMP1 antibody: EL4 cell lysate, Catalog No. 1287 LAMP2 antibody: MCF7 cell lysate, Catalog No. 1219 PIST antibody: Human colon tissue lysate, Catalog No. 1320

Ψ Properties

PURIFICATION:	Antibodies are supplied as affinity chromatography purified IgG.
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PHYSICAL STATE:	Liquid
BUFFER:	PBS containing 0.02% sodium azide.
CONCENTRATION:	Antibody 1 mg/mL
STORAGE CONDITIONS:	Stable at 4° C for three months, store at -20° C for up to one year.

Additional Info

USER NOTE:	Optimal dilutions for each application to be determined by the researcher.
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Background and References

BACKGROUND:	<p>Autophagy, the process of bulk degradation of cellular proteins through an autophagosomic-lysosomal pathway is important for normal growth control and may be defective in tumor cells. It is involved in the preservation of cellular nutrients under starvation conditions as well as the normal turnover of cytosolic components. In mammalian cells, APG7 is essential for autophagy conjugation systems, autophagosome formation, starvation-induced bulk degradation of proteins and organelles. Beclin-1, a coiled-coil Bcl-2-interacting protein homologous to the yeast autophagy gene <i>apg6</i>, is a mammalian autophagy gene that can inhibit tumorigenesis and is expressed at reduced levels in human breast carcinoma, suggesting that defects in autophagy proteins may contribute to the development or progression of tumors. PIST is a protein that interacts with Beclin-1 through its coiled-coil domain and can modulate Beclin-1 activity. LAMP1 and LAMP2 are homologous, highly glycosylated proteins associated with the lysosome and are thought to have overlapping functions. Mice lacking LAMP1 have very minor defects compared to those deficient in LAMP2 expression. However, the loss of both proteins results in embryonic lethality, suggesting that each protein possesses some unique and necessary functions.</p> <p>For images please see PDF data sheet</p>
REFERENCES:	<p>1) Gozuacik D and Kimchi A. Autophagy as a cell death and tumor suppressor mechanism. <i>Oncogene</i>. 2004; 23:2891-906.</p> <p>2) Kisen GO, Tessitore L, Costelli P, et al. Reduced autophagic activity in primary rat hepatocellular carcinoma and ascites hepatoma cells. <i>Carcinogenesis</i> 1993; 14:2501-5.</p> <p>3) Komatsu M, Waguri S, Ueno T, et al. Impairment of starvation-induced and constitutively autophagy in <i>Atg7</i>-deficient mice. <i>J. Cell. Biol.</i> 2005; 169:425-34.</p> <p>4) Liang XH, Kleeman LK, Jiang HH, et al. Protection against fatal Sindbis virus encephalitis by Beclin, a novel Bcl-2-interacting protein. <i>J. Virol.</i> 1998; 72:8586-96.</p>

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