

For Research Use Only.
Not for use in diagnostic procedures.



Anti-Atg9A pAb

CODE No.	PD042
CLONALITY	Polyclonal
ISOTYPE	Rabbit Ig, affinity purified
QUANTITY	100 µL
SOURCE	Purified Ig from rabbit serum
IMMUNOGEN	Mouse Atg9A, 506 aa-839 aa (recombinant)
FORMURATION	PBS containing 50% Glycerol (pH 7.2). No preservative is contained.
STORAGE	This antibody solution is stable for one year from the date of purchase when stored at -20°C.

APPLICATIONS-CONFIRMED

<u>Western blotting</u>	1:500 for chemiluminescence detection system
<u>Immunoprecipitation</u>	2.5 µL/300 µL of cell extract from 3 x 10 ⁶ cells
<u>Immunocytochemistry</u>	1:400

APPLICATION-REPORTED

<u>Immunohistochemistry</u>	Reference 2)
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SPECIES CROSS REACTIVITY on WB

Species	Human	Mouse	Rat	Hamster
Cell	293T	MEF	PC12	CHO
Reactivity	+	+	+	+

Entrez Gene ID 79065 (Human), 245860 (Mouse), 363254 (Rat)

REFERENCES

- 1) Imai, K., *et al.*, *J. Cell Sci.* **129**, 3781-3791 (2016) [WB]
- 2) Zhao, Y. G., *et al.*, *Autophagy* **11**, 881-890 (2015) [IHC]
- 3) Itakura, E., *et al.*, *J. Cell Sci.* **125**, 1488-1499 (2012)
- 4) Young, A. R., *et al.*, *J. Cell Sci.* **119**, 3888-3900 (2006)
- 5) Yamada, T., *et al.*, *J. Bio. Chem.* **280**, 18283-18290 (2005)

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RELATED PRODUCTS

Antibodies

D344-3	Anti-Phospho-p62 (SQSTM1) (Ser403) mAb (4C8)
D343-3	Anti-Phospho-p62 (SQSTM1) (Ser403) mAb (4F6)
PM074	Anti-Phospho-p62 (SQSTM1) (Ser351) pAb
M217-3	Anti-Phospho-p62 (SQSTM1) (Ser351) mAb (5D5)
PM045	Anti-p62 (SQSTM1) pAb
M162-3	Anti-p62 (SQSTM1) (Human) mAb (5F2)
M162-A48	Anti-p62 (SQSTM1) (Human) mAb -Alexa Fluor [®] 488 (5F2)
M162-A59	Anti-p62 (SQSTM1) (Human) mAb -Alexa Fluor [®] 594 (5F2)
M162-A64	Anti-p62 (SQSTM1) (Human) mAb -Alexa Fluor [®] 647 (5F2)
PM066	Anti-p62 C-terminal (Human) pAb
PM066-7	Anti-p62 C-terminal (Human) pAb-HRP-Direct
PM036	Anti-LC3 pAb [WB, IP, IC, IHC, FCM]
M152-3	Anti-LC3 mAb (4E12) [WB, IP, IC, FCM, EM]
M186-3	Anti-LC3 mAb (8E10) [WB]
M186-7	Anti-LC3 mAb-HRP-Direct (8E10)
PD014	Anti-LC3 pAb [WB]
PD017	Anti-Becn1 pAb
PM037	Anti-GABARAP pAb
M135-3	Anti-GABARAP mAb (1F4)
PM038	Anti-GATE-16 pAb
PD041	Anti-Atg2A pAb
PM034	Anti-Atg3 pAb
M133-3	Anti-Atg3 mAb (3E8)
M134-3	Anti-Atg4B mAb (9H5)
PM050	Anti-Atg5 pAb
M153-3	Anti-Atg5 mAb (4D3)
PM039	Anti-Atg7 (Human) pAb
PD042	Anti-Atg9A pAb
M151-3	Anti-Atg10 (Human) mAb (5A7)
M154-3	Anti-Atg12 (Human) mAb (6E5)
PD036	Anti-Atg13 (Human) pAb
M183-3	Anti-Atg13 mAb (5G4)
PD026	Anti-Atg14 pAb
M184-3	Anti-Atg14 (Human) mAb (4H8)
PM040	Anti-Atg16L pAb
M150-3	Anti-Atg16L mAb (1F12)
M160-3	Anti-UVRAG mAb (1H4)
PD027	Anti-Rubicon (Human) pAb
M170-3	Anti-Rubicon (Human) mAb (1H6)
PD037	Anti-Tel2 pAb
PM069	Anti-NRF2 pAb
M200-3	Anti-NRF2 mAb (1F2)
PM072	Anti-VMP1 pAb
PM074	Anti-Syntaxin-17 pAb
M224-3	Anti-KEAP1 mAb (KP1)
M230-3	Anti-Parkin mAb (Par6)

WB: Western blotting
IP: Immunoprecipitation
IC: Immunocytochemistry
IHC: Immunohistochemistry
FCM: Flow cytometry
EM: Immuno-electron microscopy

Other related antibodies and kits are also available.
Please visit our website at <http://ruo.mbl.co.jp/>

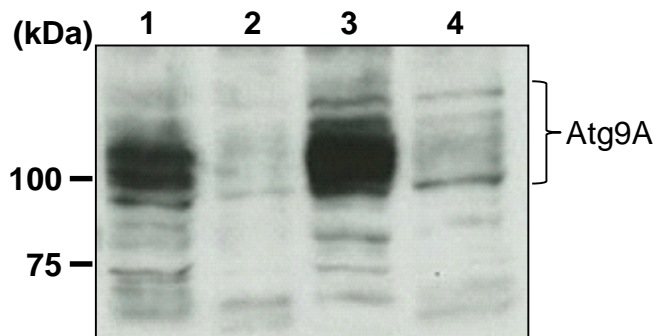
Kits

8485	Autophagy Ab Sampler Set
8486	Autophagy Watch
CY-7057	CycLex [®] Phospho-p62 Ser403 ELISA Kit
CY-7056	CycLex [®] Phospho-p62 Ser349 ELISA Kit
CY-7055	CycLex [®] Total p62 ELISA Kit
PM036-PN	Positive control for anti-LC3 antibody

SDS-PAGE & Western blotting

- 1) Wash 1×10^7 cells 3 times with PBS and suspend them in 1 mL of Laemmli's sample buffer, then sonicate briefly (up to 20 sec.).
- 2) Centrifuge the tube at $12,000 \times g$ for 5 min. at 4°C and transfer the supernatant to another tube.
- 3) Heating the samples at 55°C for 5 min. and centrifuge. Load 10 μL of the sample per lane in a 1-mm-thick SDS-polyacrylamide gel (7.5% acrylamide) for electrophoresis.
- 4) Blot the protein to a polyvinylidene difluoride (PVDF) membrane at 1 mA/cm^2 for 1 hr. in a semi-dry transfer system (Transfer Buffer: 25 mM Tris, 190 mM glycine, 20% MeOH). See the manufacturer's manual for precise transfer procedure.
- 5) To reduce nonspecific binding, soak the membrane in 10% skimmed milk (in PBS, pH 7.2) overnight at 4°C .
- 6) Wash the membrane with PBS-T (0.05% Tween-20 in PBS) (5 min. x 3 times).
- 7) Incubate the membrane with primary antibody diluted with 1% skimmed milk (in PBS, pH 7.2) as suggested in the **APPLICATIONS** for 1 hr. at room temperature. (The concentration of antibody will depend on the conditions.)
- 8) Wash the membrane with PBS-T (5 min. x 3 times).
- 9) Incubate the membrane with 1:10,000 of Anti-IgG (Rabbit) pAb-HRP (MBL; code no. 458) diluted with 1% skimmed milk (in PBS, pH 7.2) for 1 hr. at room temperature.
- 10) Wash the membrane with PBS-T (5 min. x 3 times).
- 11) Wipe excess buffer on the membrane, and then incubate it with appropriate chemiluminescence reagent for 1 min. Remove extra reagent from the membrane by dabbing with paper towel, and seal it in plastic wrap.
- 12) Expose to an X-ray film in a dark room for 1 min. Develop the film as usual. The condition for exposure and development may vary.

(Positive controls for Western blotting; 293T, MEF, PC12, and CHO)



Western blot analysis of Atg9A

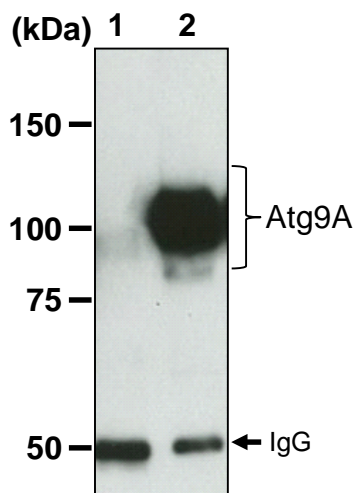
- Lane 1: 293T
- Lane 2: MEF
- Lane 3: PC12
- Lane 4: CHO

Immunoblotted with Anti-Atg9A pAb (PD042)

Immunoprecipitation

- 1) Wash 1×10^7 cells 2 times with PBS and resuspend them with 1 mL of ice-cold Lysis buffer [50 mM Tris-HCl (pH 7.5), 150 mM NaCl, 0.05% NP-40] containing appropriate protease inhibitors, then sonicate briefly (up to 20 sec.).
- 2) Centrifuge the tube at 12,000 x g for 5 min. at 4°C and transfer the supernatant to another tube.
- 3) Mix 20 μ L of 50% protein A agarose beads slurry resuspended in 300 μ L of IP buffer [10 mM Tris-HCl (pH 8.0), 500 mM NaCl, 0.1% NP-40] with primary antibody as suggested in the **APPLICATIONS**. Incubate with gentle agitation for 1 hr. at room temperature. (The amount of antibody will depend on the conditions.)
- 4) Wash the beads 3 times with 1 mL of IP buffer.
- 5) Add 300 μ L of cell lysate (prepared sample from step 2)), then incubate with gentle agitation for 1 hr. at room temperature.
- 6) Wash the beads 5 times with 1 mL of Lysis buffer.
- 7) Resuspend the beads in 20 μ L of Laemmli's sample buffer, heat it at 55°C for 5 min. and centrifuge.
- 8) Load 10 μ L of the sample per lane in a 1-mm-thick SDS-polyacrylamide gel (7.5% acrylamide) for electrophoresis.
- 9) Blot the protein to a polyvinylidene difluoride (PVDF) membrane at 1 mA/cm² for 1 hr. in a semi-dry transfer system (Transfer Buffer: 25 mM Tris, 190 mM glycine, 20% MeOH). See the manufacturer's manual for precise transfer procedure.
- 10) To reduce nonspecific binding, soak the membrane in 10% skimmed milk (in PBS, pH 7.2) overnight at 4°C.
- 11) Wash the membrane with PBS-T (0.05% Tween-20 in PBS) (5 min. x 3 times).
- 12) Incubate the membrane with primary antibody diluted with 1% skimmed milk (in PBS, pH 7.2) as suggested in the **APPLICATIONS** for 1 hr. at room temperature. (The concentration of antibody will depend on the conditions.)
- 13) Wash the membrane with PBS-T (5 min. x 3 times).
- 14) Incubate the membrane with the 1:1,000 Rabbit TrueBlot[®] anti-Rabbit IgG-HRP (eBioscience; code no. 18-8816-33) diluted with 1% skimmed milk (in PBS, pH 7.2) for 1 hr. at room temperature.
- 15) Wash the membrane with PBS-T (5 min. x 3 times).
- 16) Wipe excess buffer on the membrane, and then incubate it with appropriate chemiluminescence reagent for 1 min.
- 17) Remove extra reagent from the membrane by dabbing with paper towel, and seal it in plastic wrap.
- 18) Expose to an X-ray film in a dark room for 1 min. Develop the film as usual. The condition for exposure and development may vary.

(Positive control for Immunoprecipitation; 293T)



Immunoprecipitation of Atg9A from 293T

Lane 1: IP with Normal Rabbit IgG (PM035)

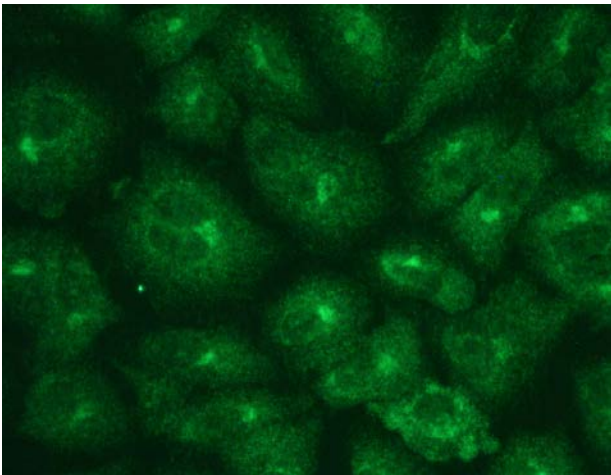
Lane 2: IP with Anti-Atg9A pAb (PD042)

Immunoblotted with PD042

Immunocytochemistry

- 1) Spread the cells on a glass slide, then incubate in a CO₂ incubator for one night.
- 2) Remove the culture supernatant by careful aspiration.
- 3) Fix the cells by immersing the slide in 4% paraformaldehyde (PFA)/PBS for 10 min. at room temperature (20~25°C).
- 4) Wash the slide 2 times with PBS.
- 5) Immerse the slide in 100 µg/mL of Digitonin in PBS for 10 min. at room temperature.
- 6) Wash the slide 2 times with PBS.
- 7) Add 200 µL of the primary antibody diluted with PBS as suggested in the **APPLICATIONS** onto the cells and incubate for 1 hr. at room temperature. (Optimization of antibody concentration or incubation condition is recommended if necessary.)
- 8) Wash the slide 2 times with PBS.
- 9) Add 200 µL of 1:500 anti-IgG (Rabbit)-Alexa Fluor[®]488 (Invitrogen; code no. A11008) diluted with PBS onto the cells. Incubate for 30 min. at room temperature. Keep out light by aluminum foil.
- 10) Wash the slide 2 times with PBS.
- 11) Promptly add mounting medium onto the slide, then put a cover slip on it.

(Positive control for Immunocytochemistry; A549)



Immunocytochemical detection of Atg9A in A549