

**LGG-1/Atg8 antibodies**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP22381b****Specification**

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**LGG-1/Atg8 antibodies - Product Information**

Application	WB,E
Primary Accession	<a href="#">Q09490</a>
Reactivity	C.Elegans
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	14764 Da
Antigen Region	20-55

**LGG-1/Atg8 antibodies - Additional Information****Gene ID** 174050**Other Names**

Protein lgg-1, lgg-1

**Target/Specificity**

This lgg-1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 20-55 amino acids from the center region of CAEEL lgg-1.

**Dilution**

WB~~1:1000

E~~Use at an assay dependent concentration.

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

LGG-1/Atg8 antibodies is for research use only and not for use in diagnostic or therapeutic procedures.

**LGG-1/Atg8 antibodies - Protein Information****Name** lgg-1 {ECO:0000312|WormBase:C32D5.9}**Function** Ubiquitin-like modifier involved in the formation of autophagosomal vacuoles (autophagosomes) (PubMed:[26687600](#), PubMed:[37395461](#)). When lipidated mediates tethering

between adjacent membranes and stimulates membrane fusion during autophagy (PubMed:[21802374](#), PubMed:[26687600](#), PubMed:[37395461](#)). Recruits lipidated-lgg-2 to maturing autophagosomes (PubMed:[12958363](#), PubMed:[20523114](#), PubMed:[26687600](#)). Acts in the aggrephagy pathway, which is the macroautophagic degradation of ubiquitinated protein aggregates, and preferentially interacts with autophagy proteins and substrates containing LIR motifs to mediate autophagosome formation and protein aggregate degradation (PubMed:[26687600](#)). In particular, binds to components of the unc-51-atg-13 complex to regulate autophagosome formation and cargo sequestration (PubMed:[26687600](#)). Required for the degradation of specific sepa-1- and sqst-1-containing protein aggregates during embryogenesis (PubMed:[26687600](#)). Involved in allophagy, which is an autophagic process in which paternal mitochondria and organelles are degraded during fertilization, and moreover is required for the formation of lgg-2-positive allophagic autophagosomes in embryos (PubMed:[24374177](#), PubMed:[37395461](#)). Involved in the clearance of apoptotic cells by promoting the delivery of engulfed apoptotic cells to the lysosome (PubMed:[22451698](#)). Plays a role in the distribution and clearance of germ cell specific P-granules from somatic cells (PubMed:[19167332](#)). Also plays a role in the autophagy-mediated degradation of ribosomal RNA and ribosomal proteins in lysosomes (PubMed:[30102152](#)). Involved in xenophagy, the autophagy-mediated degradation of pathogens and pathogen products, such as toxins (PubMed:[27875098](#)). Required for normal survival when exposed to pathogenic bacteria *S.typhimurium* probably by promoting autophagic degradation of intracellular *S.typhimurium* (PubMed:[19667176](#)). Also plays a role in membrane-pore repair (PubMed:[27875098](#)). Plays a role in mitophagy (PubMed:[25896323](#), PubMed:[37395461](#)). Essential for dauer development and longevity, including longevity in response to moderate, short-term heat shock, also known as a hormetic heat shock (PubMed:[12958363](#), PubMed:[20523114](#), PubMed:[28198373](#)).

#### **Cellular Location**

Preautophagosomal structure. Cytoplasmic vesicle, autophagosome. Cytoplasmic vesicle, autophagosome membrane. Lysosome lumen. Mitochondrion. Cytoplasm. Cytoplasmic vesicle, phagosome membrane. Cell membrane; Lipid-anchor. Cell projection, dendrite. Perikaryon. Note=In embryos, diffuse cytoplasmic localization with some areas displaying a more punctate distribution (PubMed:[19167332](#), PubMed:[19377305](#), PubMed:[20550938](#), PubMed:[24374177](#), PubMed:[28806108](#)). Specifically, upon fertilization localizes to autophagosomes around the male pronucleus (PubMed:[24374177](#)). During the first embryonic divisions and after the 25-cell stage, localizes to a large population of autophagosomes, with another smaller population of autophagosomes containing both lgg-1 and lgg-2 (PubMed:[24374177](#)) Localization to autophagosomes is dependent on atg-7 (PubMed:[24374177](#)) Co-localizes with sepa-1 in cytoplasmic aggregates (PubMed:[19167332](#), PubMed:[28806108](#), PubMed:[37395461](#)). Partially localizes to the phagosome membrane of engulfed apoptotic cells (PubMed:[22451698](#))

#### **Tissue Location**

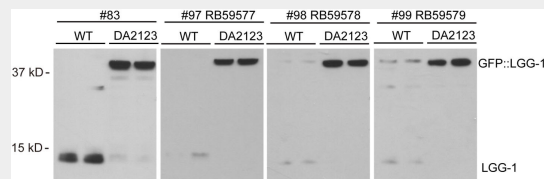
Expressed in PLML touch receptor neuron and in the ventral nerve cord (PubMed:[17327275](#)). Expressed in AIY interneurons (PubMed:[30880001](#)).

### **LGG-1/Atg8 antibodies - 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](#)

## LGG-1/Atg8 antibodies - Images



For each well, 30 *C. Elegans* worms were picked into Laemmli buffer and boiled at 95°C for 15 min. Lysates were then used for SDS PAGE/western blotting of multiple lots of Cat# AP22381b. All antibody lots were diluted 1:1000 in 1% milk in TBST. DA2123 is a transgenic *C. elegans* strain that expresses GFP-tagged LGG-1 protein (Kang et al., *Genes & Develop*, 2007). Data courtesy of Dr. Yongzhi Yang, Hansen lab SBP Institute.