

DESCRIPTION

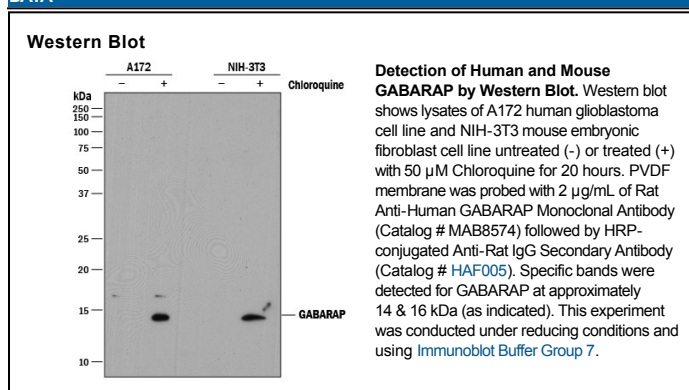
Species Reactivity	Human
Specificity	Detects human GABARAP in direct ELISAs.
Source	Monoclonal Rat IgG _{2A} Clone # 853641
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human GABARAP Accession # O95166
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	2 µg/mL	See Below

DATA



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

γ-Aminobutyric Acid Receptor-associated Protein (GABARAP), also known as Apg8p1, is 117 amino acid (aa) protein with a predicted molecular weight of 14 kDa. It is a member of the GABARAP subfamily of the Autophagy-related 8 (Atg8) family of proteins (1). The GABARAP subfamily also includes GABARAPL1. GABARAP/Apg8p1 has 100% aa sequence identity with its mouse and rat orthologs and is orthologous to yeast Atg8. Atg8 family members show structural similarity with Ubiquitin, but lack aa sequence similarity. GABARAP/Apg8p1 was first described for its putative involvement GABA A Receptor trafficking (2,3). However, it is best known for its role in autophagy (1,4). GABARAP/Apg8p1 covalently attaches to phosphatidylethanolamine (PE) in the phagophore (autophagosome precursor) membrane using a Ubiquitin-like conjugation system that includes Ubiquitin-activating (E1)-, Ubiquitin-conjugating (E2)-, and Ubiquitin Ligase (E3)-like enzymes. Here it is involved in the later stages of autophagosome maturation (4,5). It may also be involved in cargo recruitment to autophagosomes (1).

References:

1. Shpilka, T. *et al.* (2011) *Genome Biol.* **12**:226.
2. Wang, H. *et al.* (1999) *Nature* **397**:69.
3. Leil, T.A. *et al.* (2004) *J. Neurosci.* **24**:11429.
4. Weidberg, H. *et al.* (2010) *EMBO J.* **29**:1792.
5. Weidberg, H. *et al.* (2011) *Ann. Rev. Biochem.* **80**:125.