SANTA CRUZ BIOTECHNOLOGY, INC.

GABARAP (E-8): sc-377300

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

In the central nervous system GABA functions as the main inhibitory transmitter by increasing a Cl-conductance that inhibits neuronal firing. GABA has been shown to activate both ionotropic ($GABA_A$) and metabotropic ($GABA_B$) receptors as well as a third class of receptors called $GABA_C$. In addition to GABA receptors, several proteins have been identified as regulators of GABA function, including GAD65, GAD67, GABA transporters and GABARAP ($GABA_A$ receptor-associated protein). GABARAP associates with $GABA_A$ Rγ2 to link $GABA_A$ receptors to the cytoskeleton. The GABARAP protein sequence is similar to light chain-3 of microtubule-associated proteins (MAPs) suggesting that it may be a type of MAP or a component of a MAP complex.

CHROMOSOMAL LOCATION

Genetic locus: GABARAP (human) mapping to 17p13.1, GABARAPL1 (human) mapping to 12p13.2; Gabarap (mouse) mapping to 11 B3, Gabarapl1 (mouse) mapping to 6 F3.

SOURCE

GABARAP (E-8) is a mouse monoclonal antibody raised against amino acids 1-117 representing full length GABARAP of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GABARAP (E-8) is available conjugated to agarose (sc-377300 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-377300 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377300 PE), fluorescein (sc-377300 FITC), Alexa Fluor® 488 (sc-377300 AF488), Alexa Fluor® 546 (sc-377300 AF546), Alexa Fluor® 594 (sc-377300 AF594) or Alexa Fluor® 647 (sc-377300 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377300 AF680) or Alexa Fluor® 790 (sc-377300 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

GABARAP (E-8) is recommended for detection of GABARAP and GABARAPL1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

GABARAP (E-8) is also recommended for detection of GABARAP and GABARAPL1 in additional species, including canine, bovine and porcine.

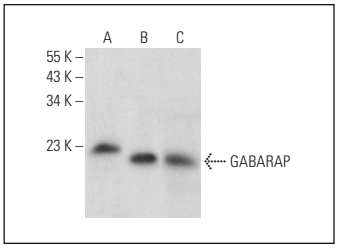
Molecular Weight of GABARAP: 14 kDa.

Positive Controls: MIA PaCa-2 cell lysate: sc-2285, Jurkat whole cell lysate: sc-2204 or HeLa whole cell lysate: sc-2200.

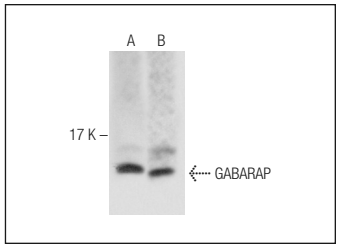
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



GABARAP (E-8): sc-377300. Western blot analysis of GABARAP expression in HeLa (**A**), Jurkat (**B**) and NIH/3T3 (**C**) whole cell lysates.



GABARAP (E-8): sc-377300. Western blot analysis of GABARAP expression in HeLa (**A**) and MIA PaCa-2 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Issa, A.R., et al. 2018. The lysosomal membrane protein LAMP2A promotes autophagic flux and prevents SNCA-induced Parkinson disease-like symptoms in the *Drosophila* brain. Autophagy 14: 1898-1910.
2. Izumi, H., et al. 2019. Recycling endosomal CD133 functions as an inhibitor of autophagy at the pericentrosomal region. Sci. Rep. 9: 2236.
3. Yang, D., et al. 2022. Ciliary type III adenylyl cyclase in the VMH is crucial for high-fat diet-induced obesity mediated by autophagy. Adv. Sci. 9: e2102568.
4. Sakaguchi, H., et al. 2022. NEAT1 confers radioresistance to hepatocellular carcinoma cells by inducing autophagy through GABARAP. Int. J. Mol. Sci. 23: 711.
5. Sawaged, S., et al. 2022. TBK1 and GABARAP family members suppress coxsackievirus B infection by limiting viral production and promoting autophagic degradation of viral extracellular vesicles. PLoS Pathog. 18: e1010350.
6. Tsuchiya, H., et al. 2022. NEAT1 confers radioresistance to hepatocellular carcinoma cells by inducing PINK1/Parkin-mediated mitophagy. Int. J. Mol. Sci. 23: 14397.

RESEARCH USE

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