

PLAA (E-1): sc-390454

BACKGROUND

WD-repeats are motifs that are found in a variety of proteins and are characterized by a conserved core of 40-60 amino acids that commonly form a tertiary propeller structure. While proteins that contain WD-repeats participate in a wide range of cellular functions, they are generally involved in regulatory mechanisms concerning chromatin assembly, cell cycle control, signal transduction, RNA processing, apoptosis and vesicular trafficking. PLAA, also known as PLAP (phospholipase A₂-activating protein) or DOA1, is a 795 amino acid protein that contains one PFU domain, one PUL domain and seven WD repeats. Via its regulatory domains, PLAA interacts with and activates phospholipase A₂ (PLA₂), thereby playing an important role in the regulation of inflammatory disease processes.

CHROMOSOMAL LOCATION

Genetic locus: PLAA (human) mapping to 9p21.2; Plaa (mouse) mapping to 4 C5.

SOURCE

PLAA (E-1) is a mouse monoclonal antibody raised against amino acids 496-795 mapping at the C-terminus of PLAA of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PLAA (E-1) is available conjugated to agarose (sc-390454 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390454 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390454 PE), fluorescein (sc-390454 FITC), Alexa Fluor[®] 488 (sc-390454 AF488), Alexa Fluor[®] 546 (sc-390454 AF546), Alexa Fluor[®] 594 (sc-390454 AF594) or Alexa Fluor[®] 647 (sc-390454 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-390454 AF680) or Alexa Fluor[®] 790 (sc-390454 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

PLAA (E-1) is recommended for detection of PLAA 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).

Suitable for use as control antibody for PLAA siRNA (h): sc-92631, PLAA siRNA (m): sc-152288, PLAA shRNA Plasmid (h): sc-92631-SH, PLAA shRNA Plasmid (m): sc-152288-SH, PLAA shRNA (h) Lentiviral Particles: sc-92631-V and PLAA shRNA (m) Lentiviral Particles: sc-152288-V.

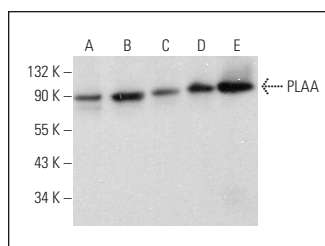
Molecular Weight of PLAA: 73 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, IMR-32 cell lysate: sc-2409 or A-431 whole cell lysate: sc-2201.

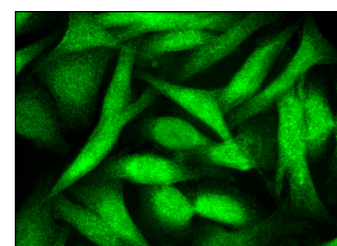
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BPHRP: sc-516102 or m-IgGκ BPHRP (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 BPHRP-FITC: sc-516140 or m-IgGκ BPHRP-FITC: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



PLAA (E-1): sc-390454. Western blot analysis of PLAA expression in K-562 (A), IMR-32 (B), A-431 (C), IMR-32 (D) and F9 (E) whole cell lysates.



PLAA (E-1): sc-390454. Immunofluorescence staining of formalin-fixed SW480 cells showing cytoplasmic and nuclear localization.

SELECT PRODUCT CITATIONS

- Seguin, S.J., et al. 2014. Inhibition of autophagy, lysosome and VCP function impairs stress granule assembly. *Cell Death Differ.* 21: 1838-1851.
- Szymczak-Pajor, I., et al. 2020. Wide-range effects of 1,25(OH)₂D₃ on group 4A phospholipases is related to nuclear factor κB and phospholipase-A₂ activating protein activity in mast cells. *Int. Arch. Allergy Immunol.* 181: 56-70.
- Ouwendijk, W.J.D., et al. 2020. Analysis of virus and host proteomes during productive HSV-1 and VZV infection in human epithelial cells. *Front. Microbiol.* 11: 1179.
- Gwon, Y., et al. 2021. Ubiquitination of G3BP1 mediates stress granule disassembly in a context-specific manner. *Science* 372: eabf6548.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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