SANTA CRUZ BIOTECHNOLOGY, INC.

NAPE-PLD (E-8): sc-514372

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

NAPE-PLD (N-acyl-phosphatidylethanolamine-hydrolyzing phospholipase D), also known as FMP30, is a 393 amino acid membrane protein and phospholipase D type enzyme that hydrolyzes N-acyl-phosphatidylethanolamines (NAPEs) to produce N-acylethanolamines (NAEs) and phosphatidic acid. Existing as a monomer, NAPE-PLD binds one or two zinc ions per subunit and is stimulated by divalent cations. NAPE-PLD also plays an essential role in the production of anandamide, a protein which acts as a ligand for vanilloid and cannabinoid receptors. The gene encoding NAPE-PLD maps to human chromosome 7, which houses over 1,000 genes and comprises nearly 5% of the human genome. Chromosome 7 has been linked to Osteogenesis imperfecta, Pendred syndrome, Lissencephaly, Citrullinemia and Shwachman-Diamond syndrome.

CHROMOSOMAL LOCATION

Genetic locus: NAPEPLD (human) mapping to 7q22.1; Napepld (mouse) mapping to 5 A3.

SOURCE

NAPE-PLD (E-8) is a mouse monoclonal antibody raised against amino acids 115-193 mapping within an internal region of NAPE-PLD 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.

NAPE-PLD (E-8) is available conjugated to agarose (sc-514372 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514372 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514372 PE), fluorescein (sc-514372 FITC), Alexa Fluor® 488 (sc-514372 AF488), Alexa Fluor® 546 (sc-514372 AF546), Alexa Fluor® 594 (sc-514372 AF594) or Alexa Fluor® 647 (sc-514372 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514372 AF680) or Alexa Fluor® 790 (sc-514372 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

NAPE-PLD (E-8) is recommended for detection of NAPE-PLD 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 NAPE-PLD siRNA (h): sc-89408, NAPE-PLD siRNA (m): sc-149828, NAPE-PLD shRNA Plasmid (h): sc-89408-SH, NAPE-PLD shRNA Plasmid (m): sc-149828-SH, NAPE-PLD shRNA (h) Lentiviral Particles: sc-89408-V and NAPE-PLD shRNA (m) Lentiviral Particles: sc-149828-V.

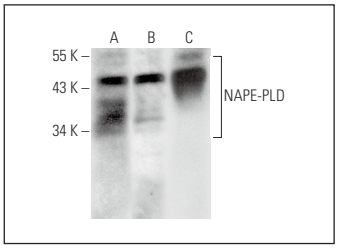
Molecular Weight of NAPE-PLD: 46 kDa.

Positive Controls: C6 whole cell lysate: sc-364373, DU 145 cell lysate: sc-2268 or Daoy whole cell lysate: sc-364381.

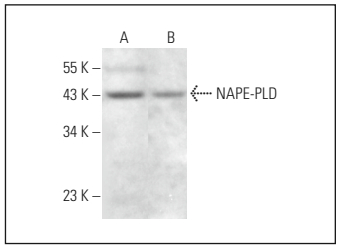
RECOMMENDED SUPPORT REAGENTS

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



NAPE-PLD (E-8): sc-514372. Western blot analysis of NAPE-PLD expression in Daoy (**A**) and DU 145 (**B**) whole cell lysates and human cerebellum tissue extract (**C**).



NAPE-PLD (E-8): sc-514372. Western blot analysis of NAPE-PLD expression in F9 (**A**) and C6 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Maia, J., et al. 2019. Effects of cannabis tetrahydrocannabinol on endocannabinoid homeostasis in human placenta. Arch. Toxicol. 93: 649-658.
2. Fonseca, B.M., et al. 2020. Decidual NK cell-derived conditioned medium from miscarriages affects endometrial stromal cell decidualisation: endocannabinoid anandamide and tumour necrosis factor-α crosstalk. Hum. Reprod. 35: 265-274.
3. Metz, V.G., et al. 2022. Cannabidiol treatment prevents drug reinstatement and the molecular alterations evoked by amphetamine on receptors and enzymes from dopaminergic and endocannabinoid systems in rats. Pharmacol. Biochem. Behav. 218: 173427.
4. Lohova, E., et al. 2022. Expression of MUC-2, MUC-6, NAPE-PLD, IL-6 and IL-13 in healthy and metaplastic bronchial epithelium. Diseases 11: 5.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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