NAPE-PLD antibody

#Cat: NB-19-0017 Size: 0.1ml

Immunogen Data

Description: NAPE-PLD (N-acyl-phosphatidylethanolamine-Phospholipase D) hydrolyzes N-acyl-phosphatidylethanolamines (NAPEs) to produce N-acylethanolamines (NAEs) and phosphatidic acid. Responsible for the generation of anandamide (N-arachidonoylethanolamine), the ligand of cannabinoid and vanilloid receptors.

Immunogen: a 13 aa chimeric peptide comprising part of both the C-terminal and the N-terminal regions of rat NAPE-PLD (MDENSCDKAFEET).
Alternative names: NAPE-PLD.
UniProt ID: Q769K2.
Mol. Weight: 46 kD.

Antibody Data

Host: Rabbit
Clonality: Polyclonal
Species Reactivity: rat, mouse and human.
Concentration: 0.39 mg/ml
Volume: 100 µl
Purity: affinity purified.
Storage Buffer: PBS 1X, sodium azide 0.05%, BSA 1 mg/ml and glycerol 50%.
Storage Instruction: Aliquot and store at -20ºC or -80ºC. Avoid freeze-thaw cycles.

Tested applications

NAPE-PLD antibody is recommended for detection of NAPE-PLD of mouse, rat and human origin by Western Blotting (starting dilution 1/200, dilution range 1/100-1/1000), and immunohistochemistry (starting dilution 1/100, dilution range 1/50-1/500).
Recommended Dilutions:
WB: 1/100-1/1000
IHC/IF: 1/50-1/500

Background references

(1) Okamoto Y, Morishita J, Tsuboi K, Tonai T, Ueda N. Molecular characterization of a phospholipase D generating anandamide and its congeners. J Biol Chem. 2004, 279(7):5298-305.
(2) Leung D, Saghatelian A, Simon GM, Cravatt BF. Inactivation of N-acyl phosphatidylethanolamine phospholipase D reveals multiple mechanisms for the biosynthesisof endocannabinoids. Biochemistry 2006, 45:4720–4726.

Applicated references

(1) Bermúdez-Silva FJ, Suárez J, Baixeras E, Cobo N, Bautista D, Cuesta-Muñoz AL, Fuentes E, Juan-Pico P, Castro MJ, Milman G, Mechoulam R, Nadal A, Rodríguez de Fonseca F. Presence of functional cannabinoid receptors in human endocrine pancreas. Diabetologia 2008, 51(3):476-87.

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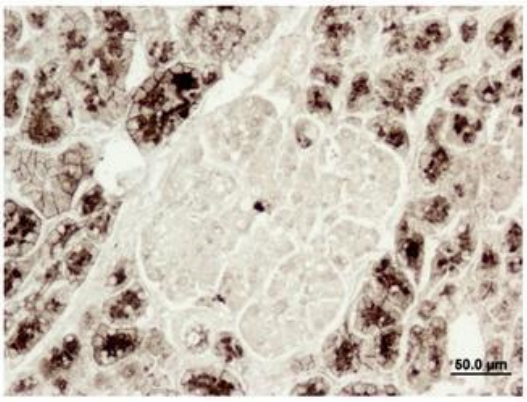
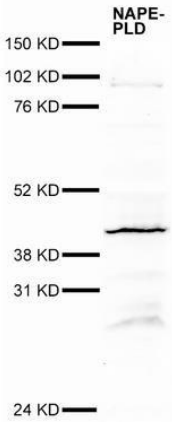
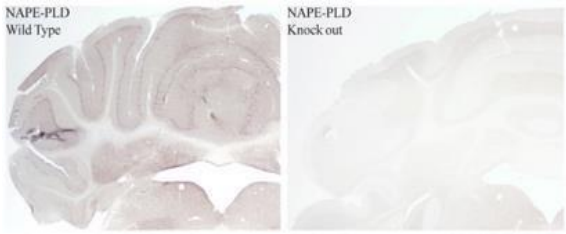
(2) Suárez J, Bermúdez-Silva FJ, Mackie K, Ledent C, Zimmer A, Cravatt BF, de Fonseca FR. Immunohistochemical description of the endogenous cannabinoid system in the rat cerebellumand functionally related nuclei. J Comp Neurol 2008, 509:400–402.
(3) Márquez L, Suárez J, Iglesias M, Bermúdez-Silva FJ, Rodríguez de Fonseca F, Andreu M. Ulcerative Colitis induces changes on the expression of the endocannabinoid system in the human colonic tissue. Plos One 2009, 34:e6893.
(4) Suárez J, Romero-Zerbo SY, Rivera P, Bermúdez-Silva FJ, Pérez J, De Fonseca FR, Fernández-Llebrez P. Endocannabinoid system in the adult rat circumventricular areas: an immunohistochemical study. J Comp Neurol. 2010 Aug 1;518(15):3065-85.



1. Immunohistochemical detection of NAPE-PLD using NB-19-0017 on formaldehyde fixed human pancreas slices. Antigen retrieval: 30 min incubation at 80ºC in 50 mM sodium citrate pH 9. 10% donkey serum as blocking agent for 1 hour. Primary antibody dilution 1/100, overnight. Secondary antibody: anti-rabbit biotin-conjugated IgG (1/500) (Bermúdez-Silva et al., 2008).



2. Immunoblot of NAPE-PLD by using antibody NB-19-0017 at 1/100 in 40 µg of rat brain membranes, developed using the ECL technique.



3. Immunohistochemical detection of NAPE-PLD using NB-19-0017 on formaldehyde fixed cerebellum of wild type and NAPE-PLD knockout mice. Antigen retrieval: 30 min incubation at 80ºC in 50 mM sodium citrate pH 9. 10% donkey serum as blocking agent for 1 hour. Primary antibody dilution 1/100, overnight. Secondary antibody: anti-rabbit biotin- conjugated IgG (1/500) (Suárez et al., 2008).