

# Product Information

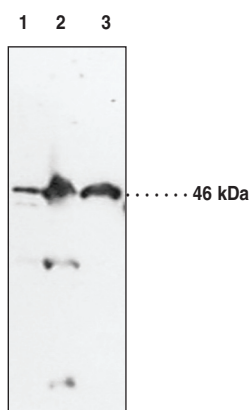


## NAPE-PLD (6-20) Polyclonal Antibody

Catalog No. 10306

- Contents:** This vial contains 300 µg affinity-purified IgG in 500 µl TBS, pH 7.4, containing 50% glycerol, 0.1% BSA, and 0.02 % sodium azide.
- Synonym:** N-Acyl-Phosphatidylethanolamine-Hydrolysing Phospholipase D
- Host:** Rabbit
- Antigen:** Human NAPE-PLD amino acids 6-20. Homology of the peptide antigen with NAPE-PLD from other species:
- |                            |                               |
|----------------------------|-------------------------------|
| Human and various primates | S N Q S L M T S S Q Y P K E A |
| Bovine                     | S N Q I L M T S n Q Y P K E A |
| Rat                        | n s Q S p a p S h Q Y P K E t |
| Murine                     | d s Q S p a p S y Q Y P K E t |
- Cross Reactivity:** (+) human, murine, rat, and bovine NAPE-PLD; other species not tested.
- Stability:** Stable for 1 year at -20°C
- Applications:** Recommended starting dilutions: Western blotting: (1:200) 3 µg/ml; Other applications were not attempted and therefore optimal working dilutions should be determined empirically.

N-acylethanolamines (NAEs) are involved in diverse biological processes such as inflammatory regulation, apoptosis, and tissue degeneration.<sup>1</sup> In animals, NAEs are mainly biosynthesized *via* a membrane phospholipid-dependent pathway, which is the enzymatic hydrolysis of N-acyl-phosphatidylethanolamine (NAPE). The enzyme catalyzing this reaction is a phospholipase D subtype selective for NAPE named N-acyl-phosphatidylethanolamine-hydrolysing phospholipase D (NAPE-PLD). It has been cloned from mouse, rat, and human and is 393-396 amino acids in length, with an estimated molecular weight of 46 kDa. Both NAPE-PLD mRNA and protein activity have been detected in a wide range of tissues with the highest levels in brain, kidney, and testis.<sup>2</sup> In rat, NAPE-PLD activity in the brain is low in neonates and is 15-fold higher in adults, whereas the activity remains constant in the heart during development.<sup>3</sup>



Lane 1: Human Cerebellum Supernatant (30 µg)  
Lane 2: Murine Brain Homogenate (50 µg)  
Lane 3: Murine Brain High-Density Membrane (30 µg)

### References

- Hansen, H.S., Moesgaard, B., Petersen, G., *et al.* Putative neuroprotective actions of N-acyl-ethanolamines. *Pharmacology & Therapeutics* **95**, 119-126 (2002).
- Okamoto, Y., Morishita, J., Tsuboi, K., *et al.* Molecular characterization of a phospholipase D generating anandamide and its congeners. *J. Biol. Chem.* **279**(7), 5298-5305 (2004).
- Moesgaard, B., Petersen, G., Jaroszewski, J.W., *et al.* Age dependent accumulation of N-acyl-ethanolamine phospholipids in ischemic rat brain: A 31P NMR and enzyme activity study. *J. Lipid Res.* **41**, 985-990 (2000).

### Related Products

NAPE-PLD (159-172) Blocking Peptide - Cat. No. 10303 • NAPE-PLD (6-20) Blocking Peptide - Cat. No. 10304 • NAPE-PLD (159-172) Polyclonal Antibody - Cat. No. 10305 • 1-Palmitoyl-2-linoleoyl PE - Cat. No. 10007072

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**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

#### MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

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