

Product Information



NAPE-PLD Blocking Peptide (aa 159-172)

Catalog No. 10303

N-acyl ethanolamines (NAEs) are involved in diverse biological processes such as inflammatory regulation, apoptosis, and tissue degeneration.¹ 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 (PLD) subtype selective for NAPE named N-acylphosphatidylethanolamine-hydrolysing PLD (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.² 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.³

Laboratory Procedures

This vial contains 200 µg peptide in 200 µl TBS, pH 7.4, containing 0.1% BSA and 0.02% sodium azide. The NAPE-PLD blocking peptide (human NAPE-PLD amino acids 159-172) can be used in conjunction with Cayman's NAPE-PLD Polyclonal Antibody (aa 159-172) (Catalog No. 10305) to block protein-antibody complex formation during immunochemical analysis of NAPE-PLD.

Store this peptide solution at -20°C. It will be stable for at least one year. To block antibody/protein complex formation, the following procedure is recommended:

1. Mix the NAPE-PLD Polyclonal Antibody (aa 159-172) Polyclonal Antibody (Catalog No. 10305) and blocking peptide together in a 1:5 (v/v) ratio in a microfuge tube. For example, mix 10 µl of antibody and 50 µl of peptide.*
2. Incubate for one hour at room temperature with occasional mixing prior to further dilution and application of the mixture to the immunoblot.
3. Dilute the mixture to the final working antibody concentration and apply to the slide or membrane as usual.

*This is a recommended mixture. The minimum amount of peptide needed for complete blocking has not been precisely determined and may vary depending on the sample being analyzed. The amount of peptide required may need to be increased if sufficient blocking does not occur.

References

1. Hansen, H.S., Moesgaard, B., Petersen, G., *et al.* Putative neuroprotective actions of N-acyl-ethanolamines. *Pharmacology & Therapeutics* **95**, 119-126 (2002).
2. 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).
3. 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 Product

NAPE-PLD Polyclonal Antibody (aa 159-172) - Cat. No. 10305

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 under separate cover to the MSDS supervisor at your institution.

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Cayman Chemical

Mailing address

1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone

(800) 364-9897
(734) 971-3335

Fax

(734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.caymanchem.com