



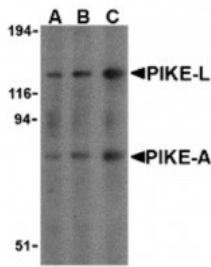
ProSci Incorporated
12170 Flint Place
Poway, CA 92064

Toll Free: +1 (888) 513 9525
Local: +1 (858) 513 2638
Fax: +1 (858) 513 2692

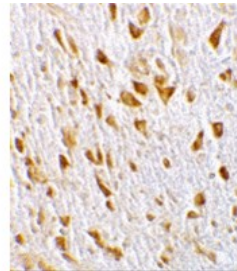
techsupport@prosci-inc.com
prosci-inc.com

PIKE Antibody

CATALOG NUMBER: 3321



Western blot analysis of PIKE in mouse brain cell lysates with PIKE antibody at (A) 0.5, (B) 1, and (C) 2 ug/mL.



Immunohistochemistry of PIKE in mouse brain tissue with PIKE antibody at 10 ug/mL.

Specifications

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|-----------------------------|--|
| SPECIES REACTIVITY: | Human, Mouse |
| HOMOLOGY: | Predicted species reactivity based on immunogen sequence: Rat: (86%) |
| TESTED APPLICATIONS: | ELISA, IHC-P, WB |
| APPLICATIONS: | PIKE antibody can be used for detection of PIKE by Western blot at 0.5 to 2 ug/mL. Antibody can also be used for immunohistochemistry starting at 10 ug/mL. Antibody validated: Western Blot in mouse samples and Immunohistochemistry in mouse samples. All other applications and species not yet tested. |
| USER NOTE: | Optimal dilutions for each application to be determined by the researcher. |
| POSITIVE CONTROL: | 1) Cat. No. 1403 - Mouse Brain Tissue Lysate |
| SPECIFICITY: | Anti-PIKE will detect both PIKE-L and PIKE-A isoforms. |
| IMMUNOGEN: | PIKE antibody was raised against a peptide corresponding to 15 amino acids near the C-terminus of human PIKE. The immunogen is located within the last 50 amino acids of PIKE. |
| HOST SPECIES: | Rabbit |

Properties

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|----------------------------|--|
| PURIFICATION: | PIKE Antibody is Ion exchange chromatography purified. |
| PHYSICAL STATE: | Liquid |
| BUFFER: | PIKE Antibody is supplied in PBS containing 0.02% sodium azide. |
| CONCENTRATION: | 1 mg/mL |
| STORAGE CONDITIONS: | PIKE antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures. |
| CLONALITY: | Polyclonal |

ISOTYPE: IgG
CONJUGATE: Unconjugated

Additional Info

ALTERNATE NAMES: PIKE Antibody: PIKE, GGAP2, CENTG1, KIAA0167, Arf-GAP with GTPase, ANK repeat and PH domain-containing protein 2, Centaurin-gamma-1, AGAP-2

ACCESSION NO.: AAM97540

PROTEIN GI NO.: 25989575

OFFICIAL SYMBOL: AGAP2

GENE ID: 116986

Background

BACKGROUND: PIKE Antibody: Phosphoinositide 3 kinase enhancer (PIKE) is a recently identified nuclear GTPase that interacts with nuclear phosphoinositide 3-kinase (PI3 kinase) to stimulate its lipid kinase activity. PIKE exists in multiple isoforms; a shorter C-terminal isoform (PIKE-A) has also been identified as centaurin gamma 1. The longest isoform (PIKE-L) has been shown to bind to the adaptor protein Homer and thereby link to metabotropic glutamate receptors, leading to activation of PI3 kinase activity and prevention of neuronal apoptosis. Overexpression of PIKE-A enhances Akt activity and promotes cancer cell invasion, whereas decreased expression of PIKE-A via dominant negative expression of PIKE-A or PIKE-A knockdown inhibits these processes. In many human cancers, expression of PIKE-A is enhanced, leading to increased Akt activity and preventing apoptosis.

REFERENCES:

- 1) Ye K, Hurt KJ, Wu FY, et al. Pike. A nuclear gtpase that enhances PI3kinase activity and is regulated by protein 4.1N. *Cell* 2000; 103:919-30.
- 2) Jackson TR, Kearns BG, and Thiebert AB. Cytohesins and centaurins: mediators of PI3-kinase-regulated Arf signaling. *Trends Biochem. Sci.* 2000; 25:489-95.
- 3) Rong R, Ahn JY, Huang H, et al. PI3 kinase enhancer-Homer complex couples mGluRI to PI3 kinase, preventing neuronal apoptosis. *Nat. Neurosci.* 2003; 6:1153-61.
- 4) Ahn J-Y, Rong R, Kroll TG, et al. PIKE (Phosphotidylinositol 3-kinase enhancer)-A GTPase stimulates Akt activity and mediates cellular invasion. *J. Biol. Chem.* 2004; 279:16441-51.

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January 11, 2019