

PXK (D-6): sc-377077

BACKGROUND

PXK (PX domain containing serine/threonine kinase), also known as FLJ20335, MONaKA or modulator of Na⁺/K⁺-ATPase, is a 578 amino acid protein which localizes to the cell membrane, peripheral membrane, cytoplasm and occasionally associates with the plasma membrane. PXK is a member of the protein kinase superfamily and assists in regulation of synaptic transmission and electrical excitability by binding Na⁺/K⁺-ATPase subunits Na⁺/K⁺-ATPase β1 and Na⁺/K⁺-ATPase β3 in the brain. However, PXK may not be capable of kinase activity. Seven known PXK isoforms exist, almost all of which are expressed in the majority of tissues (excluding heart). Isoform 1, also known as the long isoform or v1, is highly expressed in spleen, testis, brain and skeletal muscle. While PXK consists of three domains (PX, protein kinase and WH2), the protein kinase domain is not expected to be catalytically active.

REFERENCES

- Swank, R.A., et al. 1997. Four distinct cyclin-dependent kinases phosphorylate Histone H1 at all of its growth-related phosphorylation sites. *Biochemistry* 36: 13761-13768.
- Zou, X., et al. 2005. Expression pattern and subcellular localization of five splice isoforms of human PXK. *Int. J. Mol. Med.* 16: 701-707.
- Mao, H., et al. 2005. MONaKA, a novel modulator of the plasma membrane Na,K-ATPase. *J. Neurosci.* 25: 7934-7943.

CHROMOSOMAL LOCATION

Genetic locus: PXK (human) mapping to 3p14.3; Pkx (mouse) mapping to 14 A1.

SOURCE

PXK (D-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 375-407 within an internal region of PXK of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PXK (D-6) is available conjugated to agarose (sc-377077 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377077 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377077 PE), fluorescein (sc-377077 FITC), Alexa Fluor® 488 (sc-377077 AF488), Alexa Fluor® 546 (sc-377077 AF546), Alexa Fluor® 594 (sc-377077 AF594) or Alexa Fluor® 647 (sc-377077 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377077 AF680) or Alexa Fluor® 790 (sc-377077 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-377077 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

PXK (D-6) is recommended for detection of PXK 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), immunohistochemistry (including paraffin-embedded sections) (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 PXK siRNA (h): sc-77898, PXK siRNA (m): sc-152602, PXK shRNA Plasmid (h): sc-77898-SH, PXK shRNA Plasmid (m): sc-152602-SH, PXK shRNA (h) Lentiviral Particles: sc-77898-V and PXK shRNA (m) Lentiviral Particles: sc-152602-V.

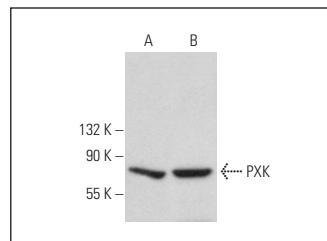
Molecular Weight of PXK: 85 kDa.

Positive Controls: Neuro-2A whole cell lysate: sc-364185, mouse brain extract: sc-2253 or Hep G2 cell lysate: sc-2227.

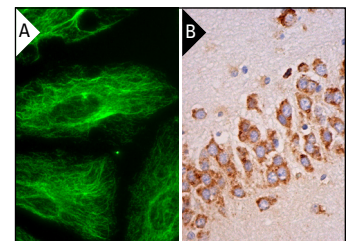
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



PXK (D-6): sc-377077. Western blot analysis of PXK expression in Hep G2 (A) and Neuro-2A (B) whole cell lysates.



PXK (D-6): sc-377077. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic, membrane and centrosome localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human hippocampus tissue showing cytoplasmic staining of neuronal cells and glial cells (B).

STORAGE

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

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