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PFTK1 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7550a

Product Information

Application	WB, IHC-P, E
Primary Accession	O94921
Other Accession	B6A7Q3, O35495, NP_036527
Reactivity	Human, Mouse
Predicted	Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	53057
Antigen Region	1-30

Additional Information

Gene ID	5218
Other Names	Cyclin-dependent kinase 14, Cell division protein kinase 14, Serine/threonine-protein kinase PFTAIRE-1, hPFTAIRE1, CDK14, KIAA0834, PFTK1
Target/Specificity	This PFTK1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from the N-terminal region of human PFTK1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	PFTK1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CDK14
Synonyms	KIAA0834, PFTK1

Function	Serine/threonine-protein kinase involved in the control of the eukaryotic cell cycle, whose activity is controlled by an associated cyclin. Acts as a cell-cycle regulator of Wnt signaling pathway during G2/M phase by mediating the phosphorylation of LRP6 at 'Ser-1490', leading to the activation of the Wnt signaling pathway. Acts as a regulator of cell cycle progression and cell proliferation via its interaction with CCDN3. Phosphorylates RB1 in vitro, however the relevance of such result remains to be confirmed in vivo. May also play a role in meiosis, neuron differentiation and may indirectly act as a negative regulator of insulin-responsive glucose transport.
Cellular Location	Cell membrane; Peripheral membrane protein. Cytoplasm. Nucleus. Note=Recruited to the cell membrane by CCNY
Tissue Location	Highly expressed in brain, pancreas, kidney, heart, testis and ovary. Also detected at lower levels in other tissues except in spleen and thymus where expression is barely detected

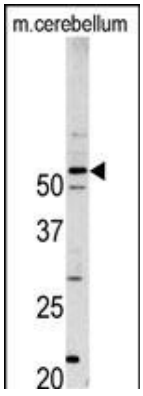
Background

PFTK1, a member of the CDC2/CDKX subfamily of Ser/Thr protein kinases, may play a role in meiosis as well as in neuron differentiation and/or function It is highly expressed in brain, pancreas, kidney, heart, testis and ovary, and also detected at lower levels in other tissues except in spleen and thymus where expression is minimal.

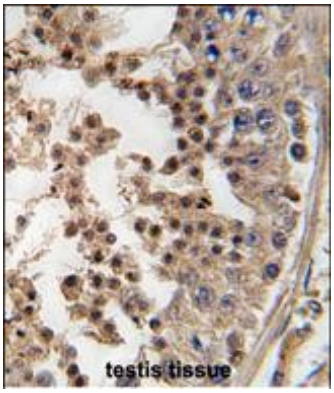
References

Yang, T., et al., Gene 267(2):165-172 (2001).
Nagase, T., et al., DNA Res. 5(6):355-364 (1998).

Images



Western blot analysis of PFTK1 antibody (N-term) (Cat.#AP7550a) in mouse cerebellum tissue lysates (35ug/lane). PFTK1 (arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human testis tissue reacted with PFTK1 antibody (N-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

Citations

- Activation/Proliferation-associated Protein 2 (Caprin-2) Positively Regulates CDK14/Cyclin Y-mediated Lipoprotein Receptor-related Protein 5 and 6 (LRP5/6) Constitutive Phosphorylation.