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PLK2 (SNK) Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7252a

Product Information

Application	WB, IHC-P, E
Primary Accession	Q9NYY3
Other Accession	Q9R012
Reactivity	Human, Mouse, Rat
Predicted	Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	78237
Antigen Region	375-406

Additional Information

Gene ID	10769
Other Names	Serine/threonine-protein kinase PLK2, Polo-like kinase 2, PLK-2, hPlk2, Serine/threonine-protein kinase SNK, hSNK, Serum-inducible kinase, PLK2, SNK
Target/Specificity	This PLK2 (SNK) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 375-406 amino acids from the C-terminal region of human PLK2 (SNK).
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is purified through a protein A column, followed by peptide affinity purification.
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	PLK2 (SNK) Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PLK2
Synonyms	SNK

Function	Tumor suppressor serine/threonine-protein kinase involved in synaptic plasticity, centriole duplication and G1/S phase transition. Polo-like kinases act by binding and phosphorylating proteins that are already phosphorylated on a specific motif recognized by the POLO box domains. Phosphorylates CPAP, NPM1, RAPGEF2, RASGRF1, SNCA, SIPA1L1 and SYNGAP1. Plays a key role in synaptic plasticity and memory by regulating the Ras and Rap protein signaling: required for overactivity-dependent spine remodeling by phosphorylating the Ras activator RASGRF1 and the Rap inhibitor SIPA1L1 leading to their degradation by the proteasome. Conversely, phosphorylates the Rap activator RAPGEF2 and the Ras inhibitor SYNGAP1, promoting their activity. Also regulates synaptic plasticity independently of kinase activity, via its interaction with NSF that disrupts the interaction between NSF and the GRIA2 subunit of AMPARs, leading to a rapid rundown of AMPAR-mediated current that occludes long term depression. Required for procentriole formation and centriole duplication by phosphorylating CPAP and NPM1, respectively. Its induction by p53/TP53 suggests that it may participate in the mitotic checkpoint following stress.
Cellular Location	Cytoplasm, cytoskeleton, microtubule organizing center, centrosome, centriole. Cell projection, dendrite Note=Localizes to centrosomes during early G1 phase where it only associates to the mother centriole and then distributes equally to both mother and daughter centrioles at the onset of S phase
Tissue Location	Expressed at higher level in the fetal lung, kidney, spleen and heart.

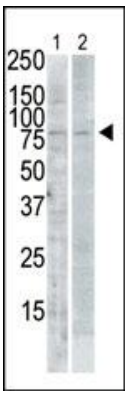
Background

Plks (polo-like kinases) encode serine/threonine kinases that are closely related to polo and CDC5, genes that are required for passage through mitosis in Drosophila and Saccharomyces, respectively. Polo-like kinases, which include Plk, Snk (for serum-inducible kinase, also designated Plk2) and Fnk (for FGF-inducible kinase, also designated Plk3 or PRK), play a role in cell proliferation. Plk protein accumulates in the cell during S and G2 phases of the cell cycle, and both protein content and catalytic activity peak at the onset of mitosis, followed by a rapid reduction after mitosis. Snk and Fnk are immediate-early response genes that are first expressed during G1 phase. SNK may play a role in the division of at least some cell types, such as fibroblasts, and could function in embryogenesis, wound healing or neoplasia SNK mRNA is rapidly induced in human lung fibroblasts upon reintroduction of serum following 36 hours of serum deprivation.

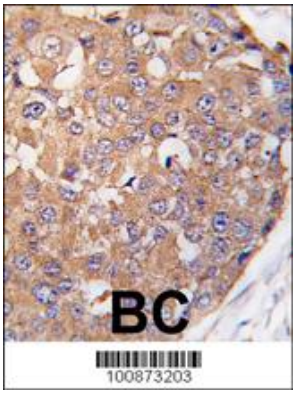
References

Strausberg, R.L., et al., Proc. Natl. Acad. Sci. U.S.A. 99(26):16899-16903 (2002).
Liby, K., et al., DNA Seq. 11:527-533 (2001).

Images



The anti-SNK C-term Pab (Cat. #AP7252a) is used in Western blot to detect SNK in PMA-treated Pam212 cell lysate (lane 1) and rat testis tissue lysate (lane 2).



Formalin-fixed and paraffin-embedded human breast carcinoma tissue reacted with SNK Antibody (C-term) (Cat.#AP7252a), 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.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.