SunLong Biotech Co.,LTD
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[Marker Primary Antibody]

Rabbit Anti-PAK3/Biotin Conjugated antibody

Catalog Number: SL1706R-Bio

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	Anti-PAK3/Biotin
Immunogen:	KLH conjugated synthetic peptide derived from human PAK3
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 1M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
Applications:	IHC-P=1:100-500 IHC-F=1:100-500 IF=1:100-500 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	Human,Mouse(predicted:Chicken,Dog,Pig,Horse,Rabbit)
Background:	background: PAK proteins are critical effectors that link Rho GTPases to cytoskeleton reorganization and nuclear signaling. PAK proteins, a family of serine/threonine p21-activating kinases, serve as targets for the small GTP binding proteins Cdc42 and RAC and have been implicated in a wide range of biological activities. The protein encoded by this gene forms an activated complex with GTP-bound RAS-like (P21), CDC2 and RAC1 proteins which then catalyzes a variety of targets. This protein may be necessary for dendritic development and for the rapid cytoskeletal reorganization in dendritic spines associated with synaptic plasticity. Defects in this gene are the cause of non-syndromic mental retardation X-linked type 30 (MRX30), also called X-linked mental retardation type 47 (MRX47). Alternatively spliced transcript variants encoding different isoforms have been identified. [provided by RefSeq, Jul 2008]

Important Note: This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

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	Function: May be the important intermediate by which p53/TP53 mediates its role as an inhibitor of cellular proliferation in response to DNA damage. Binds to and inhibits cyclin-dependent kinase activity, preventing phosphorylation of critical cyclin-dependent kinase substrates and blocking cell cycle progression. Functions in the nuclear localization and assembly of cyclin D-CDK4 complex and promotes its kinase activity towards RB1. At higher stoichiometric ratios, inhibits the kinase activity of the cyclin D-CDK4 complex **Subunit:** Interacts with HDAC1; the interaction is prevented by competitive binding of C10orf90/FATS to HDAC1 facilitating acetylation and protein stabilization of CDKN1A/p21 (By similarity). Interacts with MKRN1. Interacts with PSMA3. Interacts with PCNA. Component of the ternary complex, cyclin D-CDK4-CDKN1A. Interacts (via its N-terminal domain) with CDK4; the interaction promotes the assembly of the cyclin D-CDK4 complex, its nuclear translocation and promotes the cyclin D-dependent enzyme activity of CDK4. Binding to CDK2 leads to CDK2/cyclin E inactivation at the G1-S phase DNA damage checkpoint, thereby arresting cells at the G1-S transition during DNA repair. Interacts with PIM1. **Subcellular Location:** Cytoplasm. **Tissue Specificity:** Restricted to the nervous system. Highly expressed in postmitotic neurons of the developing and postnatal cerebral cortex and hippocampus. **Post-translational modifications:** Phosphorylation of Thr-145 by Akt or of Ser-146 by PKC impairs binding to PCNA. Phosphorylation at Ser-114 by GSK3-beta enhances ubiquitination by the DCX(DTL) complex. Phosphorylation of Thr-145 by PIM2 enhances CDKN1A stability and inhibits cell proliferation. Phosphorylation of Thr-145 by PIM1 results in the relocation of CDKN1A to the cytoplasm and enhanced CDKN1A protein stability **Similarity:** Belongs to the CDI family. Contains 1 protein kinase domain. **Database links:** **Entrez Gene:** 5063 Human **Entrez Gene:** 18481 Mouse **Entrez Gene:** 29433 Rat Omim: 300142 Human **SwissProt:** O75914 Human **SwissProt:** Q61036 Mouse **SwissProt:** Q62829 Rat **Unigene:** 10128 Rat Important

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