SunLong Biotech Co.,LTD
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[Primary Antibody]

Rabbit Anti-PTK6 antibody

Catalog Number: SL6266R

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	PTK6
Immunogen:	KLH conjugated synthetic peptide derived from human Brk/PTK6: 201-300/451
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Applications:	WB=1:500-2000 IHC-P=1:100-500 IHC-F=1:100-500 IF=1:100-500 （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	Human,Mouse (predicted:Rat,Cow,Sheep)
Predicted MW.:	52 kDa
Subcellular Location:	The nucleus cytoplasmic The cell membrane
Background:	This protein encoded is a cytoplasmic nonreceptor protein kinase which may function as an intracellular signal transducer in epithelial tissues. Overexpression of this gene in mammary epithelial cells leads to sensitization of the cells to epidermal growth factor and results in a partially transformed phenotype. Expression of this gene has been detected at low levels in some breast tumors but not in normal breast tissue. Its presence in the nucleus appears to be linked to suppression of tumor progression. The encoded protein has been shown to undergo autophosphorylation. **Function:** Non-receptor tyrosine-protein kinase implicated in the regulation of a variety of signaling pathways that control the differentiation and

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	maintenance of normal epithelia, as well as tumor growth. Function seems to be context dependent and differ depending on cell type, as well as its intracellular localization. A number of potential nuclear and cytoplasmic substrates have been identified. These include the RNA-binding proteins: KHDRBS1/SAM68, KHDRBS2/SLM1, KHDRBS3/SLM2 and SFPQ/PSF; transcription factors: STAT3 and STAT5A/B and a variety of signaling molecules: ARHGAP35/p190RhoGAP, PXN/paxillin, BTK/ATK, STAP2/BKS. Associates also with a variety of proteins that are likely upstream of PTK6 in various signaling pathways, or for which PTK6 may play an adapter-like role. These proteins include ADAM15, EGFR, ERBB2, ERBB3 and IRS4. In normal or non-tumorigenic tissues, PTK6 promotes cellular differentiation and apoptosis. In tumors PTK6 contributes to cancer progression by sensitizing cells to mitogenic signals and enhancing proliferation, anchorage-independent survival and migration/invasion. Association with EGFR, ERBB2, ERBB3 may contribute to mammary tumor development and growth through enhancement of EGF-induced signaling via BTK/AKT and PI3 kinase. Contributes to migration and proliferation by contributing to EGF-mediated phosphorylation of ARHGAP35/p190RhoGAP, which promotes association with RASA1/p120RasGAP, inactivating RhoA while activating RAS. EGF stimulation resulted in phosphorylation of PNX/Paxillin by PTK6 and activation of RAC1 via CRK/CrKII, thereby promoting migration and invasion. PTK6 activates STAT3 and STAT5B to promote proliferation. Nuclear PTK6 may be important for regulating growth in normal epithelia, while cytoplasmic PTK6 might activate oncogenic signaling pathways. Isoform 2 inhibits PTK6 phosphorylation and PTK6 association with other tyrosine-phosphorylated proteins. **Subunit:** Interacts with GAP-A.p65. Interacts (via SH3 and SH2 domains) with KHDRBS1. Interacts (via SH3 and SH2 domains) with phosphorylated IRS4. Interacts with ADAM15. Interacts (via SH3 domain) with SFPQ. Interacts with EGFR and ERBB2. Interacts with STAP2. Interacts with PNX. Interacts with SFPQ. Interacts with PTK/ATK. Interacts with CTNNB1. **Subcellular Location:** Cytoplasm. Nucleus. Cell projection, ruffle. Membrane (By similarity). Note=Colocalizes with KHDRBS1, KHDRBS2 or KHDRBS3, within the nucleus. Nuclear localization in epithelial cells of normal prostate but cytoplasmic localization in cancer prostate. **Tissue Specificity:** Epithelia-specific. Very high level in colon and high levels in small intestine and prostate, and low levels in some fetal tissues. Not expressed in breast or ovarian tissue but expressed in high pourcentage of breast and ovarian cancers. Also overexpressed in some metastatic melanomas,

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	lymphomas, colon cancers, squamous cell carcinomas and prostate cancers. Also found in melanocytes. Not expressed in heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas. Isoform 2 is present in prostate epithelial cell lines derived from normal prostate and prostate adenocarcinomas, as well as in a variety of cell lines. **Post-translational modifications:** Autophosphorylated. Autophosphorylation of Tyr-342 leads to an increase of kinase activity. Tyr-447 binds to the SH2 domain when phosphorylated and negatively regulates kinase activity. **Similarity:** Belongs to the protein kinase superfamily. Tyr protein kinase family. BRK/PTK6/SIK subfamily. Contains 1 protein kinase domain. Contains 1 SH2 domain. Contains 1 SH3 domain. **Database links:** **Entrez Gene:** 5753 Human **Entrez Gene:** 20459 Mouse **Entrez Gene:** 366275 Rat Omim: 602004 Human **SwissProt:** Q13882 Human **SwissProt:** Q64434 Mouse **Unigene:** 51133 Human **Unigene:** 4497 Mouse

[VALIDATION IMAGES]

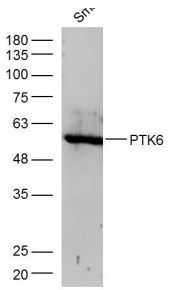


Figure 1. Sample: Small intestine (Mouse) Lysate at 40 ug Primary: Anti- PTK6 (SL6266R) at 1/300 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 52 kD Observed band size: 52 kD

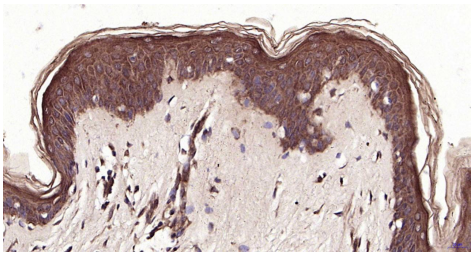


Figure 2. Paraformaldehyde-fixed, paraffin embedded Human Skin; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with PTK6 Polyclonal Antibody, Unconjugated (SL6266R) at 1:200 overnight at 4°C, followed by conjugation to the SP Kit (Rabbit, SP-0023) and DAB (C-0010) staining

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