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Rabbit Anti-WNK1/Cy5 Conjugated antibody

SL3604R-Cy5

Product Name	Anti-WNK1/Cy5
Chinese Name	Cy5 标记的赖氨酸缺陷型蛋白激酶 1 抗体
Alias	Erythrocyte 65 kDa protein; HSAN2; HSN2; hWNK1; KDP; KIAA0344; Kinase deficient protein; MGC163339; MGC163341; p65; PRKWNK1; Prostate derived sterile 20 like kinase; Protein kinase lysine deficient 1; Protein kinase lysine-deficient 1; Protein kinase with no lysine 1; PSK; Serine/threonine protein kinase WNK1; Serine/threonine-protein kinase WNK1; With no K; WNK lysine deficient protein kinase 1; WNK1; WNK1_HUMAN.
Research Area	Tumour Cell biology immunology Signal transduction Apoptosis transcriptional regulatory factor Channel protein Transporter
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Rat(predicted:Human,Mouse,Dog,Pig,Cow,Horse,Rabbit)
Applications	IF=1:100-500 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight	251kDa
Form	Lyophilized or Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human WNK1
Lsotype	IgG
Purification	affinity purified by Protein A
Storage Buffer	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
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.
Product Detail	**background:** WNK1 controls sodium and chloride ion transport by inhibiting the activity of

WNK4, potentially by either phosphorylating the kinase or via an interaction between WNK4 and the autoinhibitory domain of WNK1. WNK4 regulates the activity of the thiazide sensitive Na/Cl cotransporter, SLC12A3, by phosphorylation. WNK1 may also play a role in actin cytoskeletal reorganization.

Function:
Serine/threonine kinase which plays an important role in the regulation of electrolyte homeostasis, cell signaling, survival, and proliferation. Acts as an activator and inhibitor of sodium-coupled chloride cotransporters and potassium-coupled chloride cotransporters respectively. Activates SCNN1A, SCNN1B, SCNN1D and SGK1. Controls sodium and chloride ion transport by inhibiting the activity of WNK4, by either phosphorylating the kinase or via an interaction between WNK4 and the autoinhibitory domain of WNK1. WNK4 regulates the activity of the thiazide-sensitive Na-Cl cotransporter, SLC12A3, by phosphorylation. WNK1 may also play a role in actin cytoskeletal reorganization. Phosphorylates NEDD4L (By similarity).

Subunit:
Interacts with SYT2 (By similarity). Interacts with WNK3 and WNK4 (By similarity).

Subcellular Location:
Cytoplasm.

Tissue Specificity:
Widely expressed, with highest levels observed in the testis, heart, kidney and skeletal muscle. Isoform 3 is kidney-specific.

Post-translational modifications:
O-glycosylated.
Phosphorylated upon DNA damage, probably by ATM or ATR.

DISEASE:
Defects in WNK1 are a cause of pseudohypoaldosteronism type 2C (PHA2C) [MIM:614492]. An autosomal dominant disease characterized by severe hypertension, hyperkalemia, hyperchloremia, mild hyperchloremic metabolic acidosis in some cases, and correction of physiologic abnormalities by thiazide diuretics.
Defects in WNK1 are a cause of hereditary sensory and autonomic neuropathy type 2A (HSAN2A) [MIM:201300]. A form of hereditary sensory and autonomic neuropathy, a genetically and clinically heterogeneous group of disorders characterized by degeneration of dorsal root and autonomic ganglion

cells, and by sensory and/or autonomic abnormalities. HSAN2A is an autosomal recessive disorder characterized by impairment of pain, temperature and touch sensation, onset of symptoms in infancy or early childhood, occurrence of distal extremity pathologies (paronychia, whitlows, ulcers, and Charcot joints), frequent amputations, sensory loss that affects all modalities of sensation (lower and upper limbs and perhaps the trunk as well), absence or diminution of tendon reflexes (usually in all limbs), minimal autonomic dysfunction, absence of sensory nerve action potentials, and virtual absence of myelinated fibers with decreased numbers of unmyelinated fibers in sural nerves.

Similarity:
Belongs to the protein kinase superfamily. Ser/Thr protein kinase family. WNK subfamily.
Contains 1 protein kinase domain.

Database links:

Entrez Gene: 65125 Human

Entrez Gene: 100503989 Mouse

Entrez Gene: 232341 Mouse

Entrez Gene: 116477 Rat

Omim: 605232 Human

SwissProt: Q9H4A3 Human

SwissProt: P83741 Mouse

SwissProt: Q9JIH7 Rat

Unigene: 726723 Human

Unigene: 728846 Human

Unigene: 333349 Mouse

Unigene: 484782 Mouse

Unigene: 27409 Rat

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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Defects in WNK1 are a cause of pseudohypoaldosteronism type II (PHAII), an autosomal dominant disease characterized by severe hypertension, hyperkalemia, and sensitivity to thiazide diuretics which may result from a chloride shunt in the renal distal nephron.