

Product name:	WNK1 Rabbit Polyclonal Antibody
Cat number:	ABN19910
Conjugate:	Unconjugated
Size:	100µL
Clone:	Polyclonal
Concentration:	1mg/ml
Host:	Rabbit
Isotype:	IgG
Immunogen:	The antiserum was produced against synthesized peptide derived from human WNK1. AA range:24-73
Reactivity:	Human,Mouse,Rat
Applications:	WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:50-1:200,ELISA 1:5000-1:20000
Molecular Weight:	230kDa
Purification:	Affinity purification
Form:	Liquid
Buffer:	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Storage:	Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles.

Background:

This gene encodes a member of the WNK subfamily of serine/threonine protein kinases. The encoded protein may be a key regulator of blood pressure by controlling the transport of sodium and chloride ions. Mutations in this gene have been associated with pseudohypoaldosteronism type II and hereditary sensory neuropathy type II. Alternatively spliced transcript variants encoding different isoforms have been described but the full-length nature of all of them has yet to be determined.[provided by RefSeq, May 2010],catalytic activity:ATP + a protein = ADP + a phosphoprotein.,caution:Cys-250 is present instead of the conserved Lys which is expected to be an active site residue. Lys-233 appears to fulfill the required catalytic function.,caution:PubMed:2507249 describes a peptide sequence containing a GlcNAc glycosylated Ser in position 164 while it is an Arg residue according to others.,cofactor:Magnesium.,disease:Defects in WNK1 are a cause of pseudohypoaldosteronism type II (PHAII) [MIM:145260]. PHAII is 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.,enzyme regulation:By hypertonicity. Activation requires autophosphorylation of Ser-382. Phosphorylation of Ser-378 also promotes increased activity.,function: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.,PTM:O-glycosylated.,PTM:Phosphorylated upon DNA damage, probably by ATM or ATR.,similarity:Belongs to the protein kinase superfamily. Ser/Thr protein kinase family. WNK subfamily.,similarity:Contains 1 protein kinase domain.,subunit:Interacts with SYT2.,tissue specificity:Widely expressed, with highest levels observed in the testis, heart, kidney and skeletal muscle.,