

#4979 Store at -20°C

# WNK1 Antibody



100 µl  
(10 western blots)

**Orders** ■ 877-616-CELL (2355)  
orders@cellsignal.com  
**Support** ■ 877-678-TECH (8324)  
info@cellsignal.com  
**Web** ■ www.cellsignal.com

rev. 03/24/10

This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Entrez-Gene ID #65125  
Swiss-Prot Acc. #Q9H4A3

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Endogenous	H, Mk	230 kDa	Rabbit**

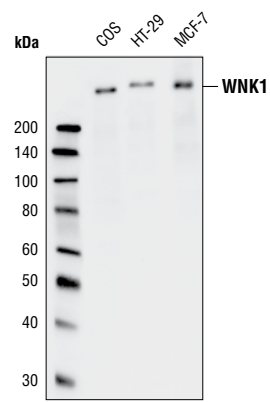
**Background:** The WNK [with no lysine (K)] family of serine/threonine kinases is characterized by having a cysteine in place of lysine in subdomain II of its kinase activation domain (1,2). The lysine necessary for phosphoryl transfer is located in an atypical position in the catalytic domain. Four members have been identified in humans (WNK1-4) and have been implicated in regulating ion permeability (3). Mutations in the WNK1 and WNK4 genes in humans cause pseudohypoaldosteronism type II (PHAII), an autosomal dominant disorder leading to hypertension, hyperkalemia, and renal tubular acidosis (4). WNK4 is specifically expressed in the kidney, whereas WNK1 has a wider distribution but is predominantly expressed in polarized epithelia (1-3). Heterozygous mutations in WNK1 in mice result in a significant decrease in blood pressure, while homozygous mutations are embryonic lethal (5). WNK1 is phosphorylated by Akt at Thr60 (6). In addition, WNK1 may be autophosphorylated at Ser382 in the activation loop, and this is thought to be required for its kinase activity (7).

**Specificity/Sensitivity:** WNK1 Antibody detects endogenous levels of total WNK1 protein.

**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the amino-terminal sequence of human WNK1. Antibodies are purified by protein A and peptide affinity chromatography.

### Background References:

- (1) Verissimo, F. and Jordan, P. (2001) *Oncogene* 20, 5562-5569.
- (2) Xu, B. et al. (2000) *J. Biol. Chem.* 275, 16795-16801.
- (3) Choate, K. A. et al. (2003) *Proc. Natl. Acad. Sci. USA* 100, 663-668.
- (4) Wilson, F. H. et al. (2001) *Science* 293, 1107-1112.
- (5) Zambrowicz, B. P. et al. (2003) *Proc. Natl. Acad. Sci. USA* 100, 14109-14114.
- (6) Vitari, A. C. et al. (2004) *Biochem. J.* 378, 257-268.
- (7) Xu, B. et al. (2002) *J. Biol. Chem.* 277, 48456-48462.



Western blot analysis of extracts from COS, HT-29, and MCF-7 cells, using WNK1 Antibody.

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

\*Species cross-reactivity is determined by western blot.

\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.

### Recommended Antibody Dilutions:

Western Blotting 1:1000

For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).

Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.

**IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.**

**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide  
**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine  
 Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.