

Product Specification Sheet

With-No-Lysine Kinase-2 (WNK2) Antibodies

<input type="checkbox"/> Cat. # WNK21-S	Rabbit Anti-Human WNK2 antiserum	SIZE: 100 ul
<input type="checkbox"/> Cat. # WNK21-A	Rabbit Anti- Human WNK2 IgG (aff pure)	SIZE: 100 ug
<input type="checkbox"/> Cat. # WNK21-P	Human WNK2 Control/blocking peptide	SIZE: 100 ug

Protein kinases represent a superfamily of over 400 members that share a catalytic domain of 250-300 amino acids. A conserved lysine, in subdomain II of the catalytic core of all 390 protein kinases, anchors α and β phosphoryl groups of ATP. The catalytic domain of **WNK** (With No **K**=Lysine) kinases contains all invariant residues, except for this **lysine** residue. There are 4 (identified) WNK genes (**WNK1**, **WNK2**, **WNK3** and **WNK4**) in human (h) and rat (r). The hWNK kinases exhibit ~30% seq identity and 50% seq homology to human Mitogen Activated Protein kinases (MAPK) **STK2**, **PAK2**, **MEKK3**, **PAK3** and **Raf-1**.

WNK2 (human 779-aa, chromosome 9q22.3) is a serine-threonine kinase with a catalytic domain which is ~91% homologous to that of hWNK1. The conserved catalytic lysine in subdomain II is replaced by a cysteine but another lysine residue in the glycine ribbon of the subdomain I confers the kinase activity. Eleven out of 33 residues in the subdomains I and II of WNK3 are conserved in the 18 WNK-related kinases. The WNK2 is predominantly expressed in heart, brain and colon.

Source of Antigen and Antibodies

Antigen	17-aa peptide from human WNK-2 (1) ; Designation (WNK21-P, control or blocking peptide) conjugated to KLH; epitope location ~ N-terminus and prior to the tyrosine kinase catalytic domain
Ab Host/type	Rabbit, Polyclonal unpurified antiserum (# WNK21-S) and IgG, purified over antigen-agarose (Cat # WNK21-A)
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
-ve control	Non-immune rabbit IgG (Cat # 20009-1) to be used as -ve control for ELISA, WB, IHC etc.

Form & Storage of Antibodies/Peptide Control

Affinity pure IgG

100 ug/100ul solution lyophilized powder

Supplied in **Buffer:** PBS+0.1% BSA

Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide

100 ug/100 ul solution lyophilized powder

Supplied in Buffer: PBS pH 7.5,

Reconstitute powder in PBS at 1 mg/ml.

Recommended Usage

Western Blotting (1:1K-5K for neat serum and 1-10 ug/ml for affinity pure using Chemiluminescence technique).

ELISA (1:10K-1:100K; using 50-100 ng of control peptide/well).

Histochemistry & Immunofluorescence: not tested. We recommend the use of affinity pure antibody at 2-20 ug/ml.

Specificity & Cross-reactivity

Human WNK21-P antigenic peptide is conserved in other species WNK2: Chimp, monkey (100%), chicken, bovine (75%), rat (50%, and mouse (43%). No significant sequence homology of WNK21-P is seen with WNK1, WNK3-4) or other proteins. Antibody reactivity in various species is not known. The WNK21-P control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity (see detailed protocol at: www.4adi.com/data/labblock.html).

General References: (1) Wilson et al. (2001) Science 293, 1107; Xu et al. (2000) J. Biol. Chem. 275, 16795; Verissimo and Jordan (2001) Oncogene 20, 5562; Ito et al. (2001) Cancer Res. 61, 2038; Moore et al. (2000) J. Biol. Chem. 275, 4311.

**This product is for In vitro research use only.*

Related materials available from ADI

Antibodies: WNK1-4, EnaCs, AQPs,

ReadyBlot Kidney Protein Explorer-Study distribution of protein in various regions of the mouse/rat kidney using the pre-made protein blots.

Western blot recycling kit-Use the same blot for WNK1-4

WNK21- S-A-P

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