

Recombinant Mouse Wnk4 Protein, Myc/DDK-tagged

Cat. No. Wnk4-7004M Lot. No. (See product label)

SPECIFICATION

Product Overview Purified recombinant protein of Mouse WNK lysine deficient protein kinase 4 (Wnk4), with C-terminal MYC/DDK tag, expressed in HEK293T cells.

Species Mouse

Source HEK293

Description 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, SGK1, TRPV5 and TRPV6. Regulates the activity of the thiazide-sensitive Na-Cl cotransporter, SLC12A3, by phosphorylation which appears to prevent membrane trafficking of SLC12A3. Also inhibits the renal K⁺ channel, KCNJ1, via a kinase-independent mechanism by which it induces clearance of the protein from the cell surface by clathrin-dependent endocytosis. WNK4 appears to act as a molecular switch that can vary the balance between NaCl reabsorption and K⁺ secretion to maintain integrated homeostasis. Phosphorylates NEDD4L. Acts as a scaffold to inhibit SLC4A4 as well as CFTR activities and surface expression, recruits STK39 which mediates the inhibition.

Molecular Mass 132.9 kDa

Purity > 80% as determined by SDS-PAGE and Coomassie blue staining

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Storage	Store at -80 centigrade after receiving vials.
Concentration	>50 µg/mL as determined by microplate BCA method
Storage Buffer	25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.

GENE INFORMATION

Gene Name	Wnk4 WNK lysine deficient protein kinase 4 [<i>Mus musculus</i> (house mouse)]
Official Symbol	Wnk4
Synonyms	WNK4; WNK lysine deficient protein kinase 4; serine/threonine-protein kinase WNK4; protein kinase with no lysine 4; protein kinase lysine-deficient 4; protein kinase, lysine deficient 4; Pha2b; Prkwkn4; 2010002J11Rik
Gene ID	69847
mRNA Refseq	NM_175638
Protein Refseq	NP_783569
UniProt ID	Q80UE6

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