Serine/Threonine-Protein Kinase WNK1 (WNK1) Rat Recombinant Protein

PRODUCT OVERVIEW

Product Name	Serine/threonine-protein kinase WNK1 (Wnk1), Recombinant Protein
Full Product Name	Recombinant Rat Serine/threonine-protein kinase WNK1 (Wnk1) , partial
Product Gene Name	Wnk1 recombinant protein
Product Synonym Gene Name	Wnk1
Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific)
Preparation and Storage	Store at -20 degrees C. For long-term storage, store at -20 degrees C or -80 degrees C. Store working aliquots at 4 degrees C for up to one week. Repeated freezing and thawing is not recommended.
Molecular Weight	15,625 Da
Tag Information	This protein contains an N-terminal tag and may also contain a C-terminal tag. Tag types are determined by various factors including tag-protein stability, please inquire for tag information.
Sterility	Sterile filter available upon request.
Endotoxin	Low endotoxin available upon request.
3D Structure	ModBase 3D Structure for Q9JIH7
Species	Rat
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for Wnk1 recombinant protein	MBS1353133 is a recombinant protein targeting Wnk1. Also known as Recombinant Rat Serine/threonine-protein kinase WNK1 (Wnk1) , partial. Host: E Coli or Yeast or Baculovirus or Mammalian Cell.
Other Notes	Small volumes of Wnk1 recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for Wnk1. It may not necessarily be applicable to this product.

NCBI GI #	312283665
NCBI GeneID	116477
NCBI Accession #	NP_001002823.2
UniProt Primary Accession #	Q9JIH7
UniProt Secondary Accession #	Q3S2I2; Q6IFS7
UniProt Related Accession #	Q9JIH7
GenBank Nucleotide #	NM_001002823.2
NCBI Official Full Name	serine/threonine-protein kinase WNK1 isoform 1
NCBI Official Synonym Full Names	WNK lysine deficient protein kinase 1

NCBI Official Symbol	Wnk1
NCBI Official Synonym Symbols	Hsn2; Prkwnk1
UniProt Protein Name	Serine/threonine-protein kinase WNK1
UniProt Synonym Protein Names	Protein kinase lysine-deficient 1
Protein Family	Probable serine/threonine-protein kinase
UniProt Gene Name	Wnk1
NCBI Protein Information	serine/threonine-protein kinase WNK1
NCBI Summary for Wnk1	catalyzes the phosphorylation of myelin basic protein in vitro; has autophosphorylation activity; may regulate the thiazide-sensitive Na-Cl cotransporter NCC [RGD, Feb 2006]
UniProt Comments for Wnk1	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. Acts as a scaffold to inhibit SLC4A4, SLC26A6 as well as CFTR activities and surface expression, recruits STK39 which mediates the inhibition ().
Research Articles on Wnk1	**1.** these data provide insight into the mechanism regulating Cl(-) homeostasis in immature neurons, and suggest that WNK1-regulated changes in KCC2 phosphorylation contribute to the developmental excitatory-to-inhibitory GABA sequence.
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