

# Recombinant Human VRK1 Protein

Catalog Number:PKSH031090



**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

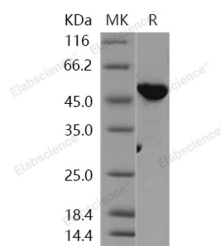
## Description

<b>Synonyms</b>	PCH1;PCH1A
<b>Species</b>	Human
<b>Expression Host</b>	Baculovirus-Insect Cells
<b>Sequence</b>	Met 1-Lys 396
<b>Accession</b>	Q99986
<b>Calculated Molecular Weight</b>	45.6 kDa
<b>Observed molecular weight</b>	47 kDa
<b>Tag</b>	None

## Properties

<b>Purity</b>	> 95 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 1.0 EU per µg of the protein as determined by the LAL method.
<b>Storage</b>	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from sterile 20mM Tris, 500mM NaCl, 10% glycerol, pH 7.4 Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
<b>Reconstitution</b>	Please refer to the printed manual for detailed information.

## Data



> 95 % as determined by reducing SDS-PAGE.

## Background

VRK1 is a member of the vaccinia-related kinase (VRK) family of serine/threonine protein kinases. Serine/threonine protein kinases are tumor suppressor that controls the activity of AMP-activated protein kinase family members; thereby playing a role in various processes such as cell metabolism; cell polarity; apoptosis and DNA damage response. VRK1 contains 1 protein kinase domain and localizes to the nucleus. VRK1 gene is widely expressed in human tissues and has increased expression in actively dividing cells; such as those in testis; thymus; fetal liver; and carcinomas. As a serine/threonine kinase; VRK1 phosphorylates 'Thr-18' of p53/TP53 and may thereby prevent the interaction between p53/TP53 and MDM2. Defects in VRK1 are the cause of pontocerebellar hypoplasia type 1 (PCH1); also called pontocerebellar hypoplasia with infantile spinal muscular atrophy or pontocerebellar hypoplasia with anterior horn cell

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disease. PCH1 is characterized by an abnormally small cerebellum and brainstem; central and peripheral motor dysfunction from birth; gliosis and anterior horn cell degeneration resembling infantile spinal muscular atrophy.

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