

Recombinant Human VRK1 Protein

Catalog Number: PKSH031090

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

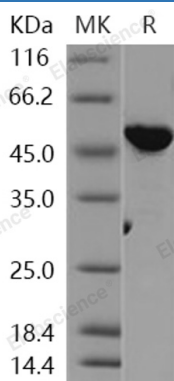
Description

| | |
|---------------------|---|
| Species | Human |
| Source | Baculovirus-Insect Cells-derived Human VRK1 protein Met 1-Lys 396 |
| Mol_Mass | 45.6 kDa |
| Accession | Q99986 |
| Bio-activity | Not validated for activity |

Properties

| | |
|-----------------------|---|
| Purity | > 95 % as determined by reducing SDS-PAGE. |
| Endotoxin | < 1.0 EU per µg of the protein as determined by the LAL method. |
| Storage | 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. |
| Shipping | This product is provided as lyophilized powder which is shipped with ice packs. |
| Formulation | Lyophilized from sterile 20mM Tris, 500mM NaCl, 10% glycerol, pH 7.4 Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual. |
| Reconstitution | Please refer to the printed manual for detailed information. |

Data



> 95 % as determined by reducing SDS-PAGE.

Background

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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 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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