

## VLK Protein

Recombinant human protein expressed in Sf9 cells

**Catalog # V05-31G**

Lot # P1532-4

### Product Description

Recombinant human VLK (129-end) was expressed by baculovirus in Sf9 insect cells using an N-terminal GST tag. The VLK gene accession number is [NM\\_138370](#).

### Gene Aliases

SGK493; PKDCC

### Formulation

Recombinant protein stored in 50mM Tris-HCl, pH 7.5, 50mM NaCl, 10mM glutathione, 0.1mM EDTA, 0.25mM DTT, 0.1mM PMSF, and 25% glycerol.

### Storage and Stability

Store product at -70°C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

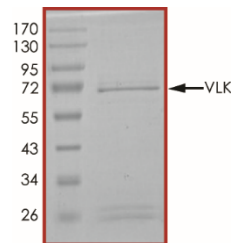
### Scientific Background

VLK or vertebrate lonesome kinase is a protein kinase which is first expressed in E-cadherin-positive anterior visceral endoderm and mesendoderm, and later its expression is confined to E-cadherin-negative mesenchyme. VLK regulates the rate of protein export from the Golgi and thereby plays an important role in the formation of functional stroma by mesenchymal cells (1). Targeted disruption of VLK leads to a defect in lung development and delayed ossification of endochondral bone. VLK deficient mice display neonatal lethality due to respiratory failure, with a suckling defect arising from a cleft palate. VLK is required for the appropriate timing of flat proliferative chondrocyte differentiation (2).

### References

1. Kinoshita, et.al: The novel protein kinase VLK is essential for stromal function of mesenchymal cells. *Development* 136: 2069-2079, 2009.
2. Imuta, Y. et al: Short limbs, cleft palate, and delayed formation of flat proliferative chondrocytes in mice with targeted disruption of a putative protein kinase gene, *Pkdcc* (AW548124). *Dev Dyn.* 2009 Jan; 238(1):210-22.

### Purity



The purity of VLK was determined to be **>70%** by densitometry, approx. MW **69 kDa**.

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Catalog #	V05-31G
Lot #	P1532-4
Purity	>70%
Concentration	0.05 µg/µl
Stability	1yr at -70°C from date of shipment
Storage & Shipping	Store product at -70°C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles. Product shipped on dry ice.

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