

## Active Recombinant Human PDK1, His-tagged

Cat. No. PDK1-387H    Lot. No. (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant full-length human PDK1 was expressed by baculovirus in Sf9 insect cells using a N-terminal His tag.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Source</b>           | Sf9 Cells                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Description</b>      | <p>PDK1 (3-phosphoinositide-dependent protein kinase) is activated by the presence of PtdIns(3,4,5)P3 or PtdIns(3,4)P2 (1). PDK1 then activates protein kinase B (PKB) which, in turn, inactivates glycogen synthase kinase-3 (GSK3). The phosphorylation of other proteins by PKB and GSK3 is likely to mediate many of the intracellular actions of insulin. Thus, PDK1 plays a key role in mediating many of the actions of the second messenger(s) PtdIns(3,4, 5)P3 and/or PtdIns(3,4)P2. The human PDK1 is a 556-residue monomeric enzyme comprising of a catalytic domain that is most similar to the PKA, PKB and PKC subfamily of protein kinases.</p> |
| <b>Form</b>             | Recombinant protein stored in 50mM sodium phosphate, pH 7.0, 300mM NaCl, 150mM imidazole, 0.1mM PMSF, 0.2mM DTT, 25% glycerol.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Bio-activity</b>     | The specific activity of PDK1 was determined to be 118 nmol/min/mg.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Molecular Mass</b>   | ~67 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Purity</b>           | > 90%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

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|                            |                                                                                                                                                                                                                                         |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Applications</b>        | Kinase Assay; Western Blot                                                                                                                                                                                                              |
| <b>Storage</b>             | Store product at –70oC. 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. |
| <b>Concentration</b>       | 0.1 ug/ul                                                                                                                                                                                                                               |
| <b>GENE INFORMATION</b>    |                                                                                                                                                                                                                                         |
| <b>Gene Name</b>           | PDPK1 3-phosphoinositide dependent protein kinase-1 [ Homo sapiens (human) ]                                                                                                                                                            |
| <b>Official Symbol</b>     | PDPK1                                                                                                                                                                                                                                   |
| <b>Synonyms</b>            | PDPK1; PDK1; PDPK2; PRO0461; 3-phosphoinositide dependent protein kinase-1; 3-phosphoinositide-dependent protein kinase 1; PkB kinase like gene 1; NP_001248745.1; EC 2.7.11.1; NP_002604.1                                             |
| <b>Gene ID</b>             | 5170                                                                                                                                                                                                                                    |
| <b>mRNA Refseq</b>         | NM_002613                                                                                                                                                                                                                               |
| <b>Protein Refseq</b>      | NP_002604                                                                                                                                                                                                                               |
| <b>MIM</b>                 | 605213                                                                                                                                                                                                                                  |
| <b>UniProt ID</b>          | O15530                                                                                                                                                                                                                                  |
| <b>Chromosome Location</b> | 16p13.3                                                                                                                                                                                                                                 |
| <b>Pathway</b>             | Activation of NMDA receptor upon glutamate binding and postsynaptic events;                                                                                                                                                             |

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Activation of PKB; Adaptive Immune System

**Function**

3-phosphoinositide-dependent protein kinase activity; ATP binding; insulin receptor binding

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