

# Recombinant Human PRKCI

**Cat. No.** PRKCI-28942TH    **Lot. No.** (See product label)

## SPECIFICATION

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b>    | Recombinant full length protein,(amino acids 2-587) of Human PKC iota/lambda, with an N terminal tag.Expressed in a Baculovirus infected Sf9 cell expression system.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Species</b>             | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>ProteinLength</b>       | 2-587 a.a.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Description</b>         | This gene encodes a member of the protein kinase C (PKC) family of serine/threonine protein kinases. The PKC family comprises at least eight members, which are differentially expressed and are involved in a wide variety of cellular processes. This protein kinase is calcium-independent and phospholipid-dependent. It is not activated by phorbolsters or diacylglycerol. This kinase can be recruited to vesicle tubular clusters (VTCs) by direct interaction with the small GTPase RAB2, where this kinase phosphorylates glyceraldehyde-3-phosphate dehydrogenase (GAPD/GAPDH) and plays a role in microtubule dynamics in the early secretory pathway. This kinase is found to be necessary for BCL-ABL-mediated resistance to drug-induced apoptosis and therefore protects leukemia cells against drug-induced apoptosis. There is a single exon pseudogene mapped on chromosome X. |
| <b>Tissue specificity</b>  | Predominantly expressed in lung and brain, but also expressed at lower levels in many tissues including pancreatic islets. Highly expressed in non-small cell lung cancers.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Biological activity</b> | 35 U/ug. One unit is defined as the amount of enzyme that will phosphorylate 1 pmol                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

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of Ser/Thr 7 peptide substrate per minute at pH 7.4 and 30°C.

|                              |                                                                                                                                                                                                                                               |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Form</b>                  | Liquid                                                                                                                                                                                                                                        |
| <b>Purity</b>                | >95% by SDS-PAGE                                                                                                                                                                                                                              |
| <b>Storage buffer</b>        | Preservative: None<br>Constituents: 50% Glycerol, 0.05% Tween 20, 3mM DTT, 25mM Tris HCl, 100mM Sodium chloride, 10mM reduced Glutathione, pH 8.0                                                                                             |
| <b>Storage</b>               | Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.                                                                                                                                                         |
| <b>Sequence Similarities</b> | Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family. PKC subfamily. Contains 1 AGC-kinase C-terminal domain. Contains 1 OPR domain. Contains 1 phorbol-ester/DAG-type zinc finger. Contains 1 protein kinase domain. |
| <b>Full Length</b>           | Full L.                                                                                                                                                                                                                                       |

## GENE INFORMATION

|                        |                                                                            |
|------------------------|----------------------------------------------------------------------------|
| <b>Gene Name</b>       | PRKCI protein kinase C, iota [ Homo sapiens ]                              |
| <b>Official Symbol</b> | PRKCI                                                                      |
| <b>Synonyms</b>        | PRKCI; protein kinase C, iota; DXS1179E; protein kinase C iota type; PKCI; |
| <b>Gene ID</b>         | 5584                                                                       |
| <b>mRNA Refseq</b>     | NM_002740                                                                  |
| <b>Protein Refseq</b>  | NP_002731                                                                  |

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|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MIM</b>                 | 600539                                                                                                                                                                                                                                                                       |
| <b>Uniprot ID</b>          | P41743                                                                                                                                                                                                                                                                       |
| <b>Chromosome Location</b> | 3q26.3                                                                                                                                                                                                                                                                       |
| <b>Pathway</b>             | Cell junction organization, organism-specific biosystem; Cell-Cell communication, organism-specific biosystem; Cell-cell junction organization, organism-specific biosystem; EGFR1 Signaling Pathway, organism-specific biosystem; Endocytosis, organism-specific biosystem; |
| <b>Function</b>            | ATP binding; metal ion binding; nucleotide binding; phospholipid binding; protein binding;                                                                                                                                                                                   |

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