

# Active Recombinant Human AKT2, His-tagged

**Cat. No.** AKT2-1364H    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant full-length human AKT2 was expressed by baculovirus in Sf9 insect cells using a N-terminal His tag.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Source</b>           | Sf9 Cells                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>ProteinLength</b>    | Full length                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Description</b>      | AKT2 or Protein Kinase B $\beta$ (PKB $\beta$ ) is a serine/threonine kinase that is a member of the AKT family. AKT2 like the other AKT members is activated in cells in response to diverse stimuli such as hormones, growth factors and extracellular matrix components and is involved in glucose metabolism, transcription, survival, cell proliferation, angiogenesis, and cell motility. The PI3K generates phosphatidylinositol-3,4,5-trisphosphate (PIP3), a lipid second messenger essential for the translocation of AKT2 to the plasma membrane where it is phosphorylated and activated by phosphoinositide-dependent kinase-1 (PDK-1). |
| <b>Form</b>             | Recombinant protein stored in 50mM sodium phosphate, pH 7.0, 300mM NaCl, 150mM imidazole, 0.1mM PMSF, 2mM DTT, 25% glycerol.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Bio-activity</b>     | 40 nmol/min/mg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Molecular Mass</b>   | ~58 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

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|                         |                                                                                                                                                                                                                                                                             |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Purity</b>           | >70%                                                                                                                                                                                                                                                                        |
| <b>Applications</b>     | Kinase Assay, Western Blot                                                                                                                                                                                                                                                  |
| <b>Storage</b>          | Store at –70°C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. Avoid freeze/thaw cycles.                                                                                                            |
| <b>Concentration</b>    | 0.1µg/µl                                                                                                                                                                                                                                                                    |
| <b>GENE INFORMATION</b> |                                                                                                                                                                                                                                                                             |
| <b>Gene Name</b>        | AKT2 v-akt murine thymoma viral oncogene homolog 2 [ Homo sapiens ]                                                                                                                                                                                                         |
| <b>Official Symbol</b>  | AKT2                                                                                                                                                                                                                                                                        |
| <b>Synonyms</b>         | AKT2; v-akt murine thymoma viral oncogene homolog 2; RAC-beta serine/threonine-protein kinase; PKB beta; RAC-PK-beta; protein kinase Akt-2; protein kinase B beta; rac protein kinase beta; murine thymoma viral (v-akt) homolog-2; PKBB; PRKBB; HIHGHH; PKBBETA; RAC-BETA; |
| <b>Gene ID</b>          | 208                                                                                                                                                                                                                                                                         |
| <b>mRNA Refseq</b>      | NM_001243027                                                                                                                                                                                                                                                                |
| <b>Protein Refseq</b>   | NP_001229956                                                                                                                                                                                                                                                                |
| <b>MIM</b>              | 164731                                                                                                                                                                                                                                                                      |
| <b>UniProt ID</b>       | P31751                                                                                                                                                                                                                                                                      |
| <b>Chromosome</b>       | 19q13.1-q13.2                                                                                                                                                                                                                                                               |

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| Location |                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pathway  | AKT phosphorylates targets in the cytosol, organism-specific biosystem; AKT phosphorylates targets in the nucleus, organism-specific biosystem; AKT-mediated inactivation of FOXO1A, organism-specific biosystem; Activation of PKB, organism-specific biosystem; Acute myeloid leukemia, organism-specific biosystem; Acute myeloid leukemia, conserved biosystem; Adaptive Immune System, organism-specific biosystem; |
| Function | ATP binding; ATP binding; kinase activity; nucleotide binding; protein binding; protein kinase C binding; protein serine/threonine kinase activity; protein serine/threonine kinase activity; protein serine/threonine kinase activity;                                                                                                                                                                                  |

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