

## Recombinant AKT3 protein

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**Catalog No:** 81147, 81847

**Lot No:** 11418001

**Expressed In:** Baculovirus

**Quantity:** 20, 1000 µg

**Concentration:** 0.3 µg/µl

**Source:** Human

**Buffer Contents:** Recombinant AKT3 protein is supplied in 25 mM HEPES-NaOH pH 7.5, 300 mM NaCl, 10% glycerol, 0.04% Triton X-100, and 0.5 mM TCEP.

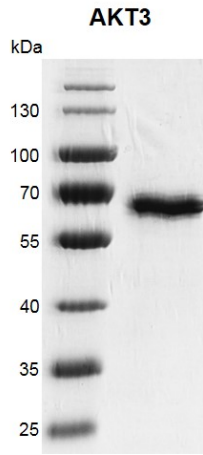
**Background:** AKT3 (AKT Serine/Threonine Kinase 3), also known as Protein Kinase B Gamma or PRKBG, is one of 3 closely related serine/threonine-protein kinases (AKT1, AKT2 and AKT3) called the AKT kinase, and which regulate many processes including metabolism, proliferation, cell survival, growth and angiogenesis. This is mediated through serine and/or threonine phosphorylation of a range of downstream substrates. Over 100 substrate candidates have been reported so far, but for most of them, no isoform specificity has been reported. AKT3 is the least studied AKT isoform. It plays an important role in brain development and is crucial for the viability of malignant glioma cells. AKT3 isoform may also be the key molecule in up-regulation and down-regulation of MMP13 via IL13. It is required for the coordination of mitochondrial biogenesis with growth factor-induced increases in cellular energy demands. Down-regulation by RNA interference reduces the expression of the phosphorylated form of BAD, resulting in the induction of caspase-dependent apoptosis.

**Protein Details:** Recombinant AKT3 protein was expressed in a baculovirus expression system as the full length protein (accession number NP\_005456.1) with an N-terminal 6XHis and FLAG-Tag. The molecular weight of the protein is 60.8 kDa.

**Application Notes:** Recombinant AKT3 protein is suitable for use in the study of enzyme kinetics, inhibitor screening, and selectivity profiling.

**Kinase Activity Assay Conditions:** 1 µM STK S3 substrate was incubated with different concentrations AKT3 protein in a 10 µl reaction system containing 1×Enzymatic Buffer, 5 mM MgCl<sub>2</sub>, 1 mM DTT, 5 nM SEB and 100 µM ATP for 1 hour. The 10 µl detection reagents containing STK antibody and SA-XL665, each of which was 1:100 diluted with 1× Detection Buffer were added and incubated with the reactions for 30 min. All the operations and reactions were performed at room temperature, and HTRF KinEASE STK assay was used to detect the enzymatic activity.

**Storage and Guarantee:** Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is for research use only and is not for use in diagnostic procedures. This product is guaranteed for 6 months from date of arrival.

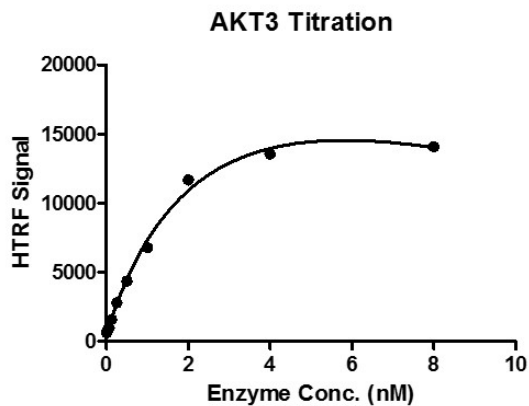


### Recombinant AKT3 protein gel

10% SDS-PAGE Coomassie staining

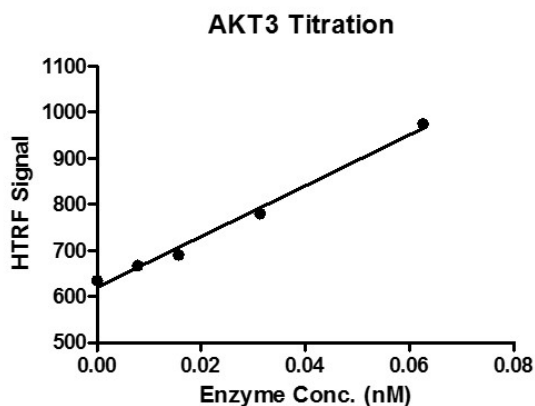
MW: 60.8 kDa

Purity:  $\geq 90\%$



### HTRF assay for recombinant AKT3 protein activity

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