

Product Information

Anti-AKT2 antibody, Mouse monoclonal

clone AKT2(104), purified from hybridoma cell culture

Product Number **SAB4200727**

Product Description

Anti-AKT2 antibody, Mouse monoclonal, (mouse IgG2a isotype) is derived from the AKT2(104) hybridoma produced by the fusion of mouse myeloma cells and splenocytes from a BALB/c mouse immunized with synthetic peptide from the internal region of human AKT2 protein, conjugated to KLH (GeneID 208). The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents, Product Number ISO2. The antibody is purified from culture supernatant of hybridoma cells.

Monoclonal Anti-AKT2 antibody specifically recognizes human, mouse and rat AKT2 and does not recognize AKT1 nor AKT3. Monoclonal Anti-AKT2 is recommended to use in various immunochemical assays, including Immunoblot (band at ~56 kDa).

AKT2 protein, also known as RAC-beta serine/threonine-protein kinase, Protein kinase Akt-2 and Protein kinase B beta (PKB beta), belongs to the subfamily of three closely related protein-serine/threonine kinases (AKT1, AKT2 and AKT3) containing Src homology 2-like domains.¹ AKT kinase family regulates many cellular processes including metabolism, proliferation, cell survival, skeletal muscle differentiation growth and angiogenesis which are mediated through serine and/or threonine phosphorylation of a range of downstream substrates. AKT2 is highly expressed in insulin-responsive tissues such as adipose tissue, liver and skeletal muscle. It is thought to be a key mediator of the insulin signal transduction process and is required for glucose metabolism.²⁻³ AKT2 plays an important role in PI3K signaling pathway and is over-expressed in a variety of malignant tumors.⁴ In addition, it is considered to be a useful molecular marker for predicting the prognosis of meningioma⁵ and breast cancer.⁶ Due to its important role in neuroblastoma tumorigenesis it can be used as a target for developing novel therapeutics for the treatment of clinically aggressive neuroblastoma.⁷

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline pH 7.4, containing 15 mM sodium azide.

Antibody Concentration: ~ 1.0 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store at -20 °C. For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 10-20 µg/ml is recommended using human T lymphocyte Jurkat cell extract.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

References

1. Yu H., et al., *Vascul Pharmacol.*, **71**, 57-64 (2015).
2. Dummler B., et al., *Mol Cell Biol.*, **26**, 8042-51 (2006).
3. Fayard E., et al., *J Cell Sci.*, **118**, 5675-8 (2005).
4. Cohen MM Jr., *Am J Med Genet A*, **161A**, 2931-7 (2013).
5. Wang Q., et al., *Eur J Surg Oncol (EJSO)*, **40**, 1056-61 (2014).
6. Clark AR and Toker A., *Biochem Soc Trans.*, **42**, 1349-55 (2014).
7. Qiao J., et al., *PLoS ONE*, **8**, e56382 (2013).

SG,DR_OKF/LV,PHC 04/17-1