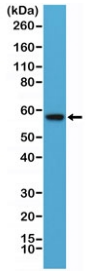
Recombinant AKT Antibody / PH domain [clone RM316] (R20335)

Catalog No.	Formulation	Size
R20335-0.1ML	Antibody in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ul

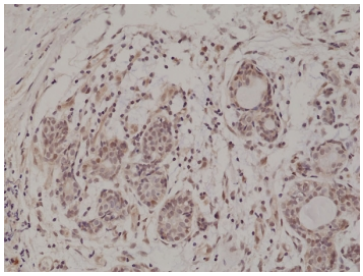
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM316
Purity	Protein A purified from animal origin-free supernatant
UniProt	P31749, P31751, Q9Y243
Localization	Cytoplasmic, membranous, nuclear
Applications	Immunohistochemistry (FFPE) : 1:200-1:500 Western Blot : 1:5000-1:10000
Limitations	This recombinant AKT antibody is available for research use only.



Western blot testing of human HEK293 cell lysate with recombinant AKT antibody at 1:10,000 dilution. Predicted molecular weight: ~56 kDa.



IHC testing of formalin fixed and paraffin embedded human breast cancer tissue with recombinant CD56 antibody at 1:500 dilution. HIER: steam section in pH6 citrate buffer for 20 min and allow to cool prior to staining.

Description

Akt isoforms are overexpressed in a variety of human tumors, and, at the genomic level, are amplified in gastric adenocarcinomas (Akt1), ovarian (Akt2), pancreatic (Akt2) and breast (Akt2) cancer. The role of Akt3 is less clear, though it appears to be predominantly expressed in the brain.

Akt possesses a protein domain known as a PH domain, or Pleckstrin Homology domain, named after Pleckstrin, the protein in which it was first discovered. This domain binds to phosphoinositides with high affinity. In the case of the PH domain of Akt, it binds either PIP3 (phosphatidylinositol (3,4,5)-trisphosphate, PtdIns(3,4,5)P3) or PIP2 (phosphatidylinositol (3,4)-bisphosphate, PtdIns(3,4)P2).[9] This is useful for control of cellular signaling because the di-phosphorylated phosphoinositide PIP2 is only phosphorylated by the family of enzymes, PI 3-kinases (phosphoinositide 3-kinase or PI3-K), and only upon receipt of chemical messengers which tell the cell to begin the growth process. For example, PI 3-kinases may be activated by a G protein coupled receptor or receptor tyrosine kinase such as the insulin receptor. Once activated, PI 3-kinase phosphorylates PIP2 to form PIP3. [Wiki]

Application Notes

The stated application concentrations are suggested starting points. Titration of the recombinant AKT antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A peptide corresponding to the PH domain of human AKT1/2/3 was used as the immunogen for the recombinant AKT antibody.

Storage

Store the recombinant AKT antibody at -20oC.