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# AKT1 Antibody (monoclonal) (M03)

Mouse monoclonal antibody raised against a full length recombinant AKT1.
Catalog # AT1097a

## Product Information

| | |
|---|---|
| **Application** | WB, IHC, IF, IP, E |
| **Primary Accession** | P31749 |
| **Other Accession** | BC000479 |
| **Reactivity** | Human, Mouse, Rat |
| **Host** | mouse |
| **Clonality** | monoclonal |
| **Isotype** | IgG2a Kappa |
| **Clone Names** | 2E12 |
| **Calculated MW** | 55686 |

## Additional Information

| | |
|---|---|
| **Gene ID** | 207 |
| **Other Names** | RAC-alpha serine/threonine-protein kinase, Protein kinase B, PKB, Protein kinase B alpha, PKB alpha, Proto-oncogene c-Akt, RAC-PK-alpha, AKT1, PKB, RAC |
| **Target/Specificity** | AKT1 (AAH00479.1, 1 a.a. ~ 480 a.a) full-length recombinant protein with GST tag. MW of the GST tag alone is 26 KDa. |
| **Dilution** | WB~~1:500~1000 IHC~~1:100~500 IF~~1:50~200 IP~~N/A E~~N/A |
| **Format** | Clear, colorless solution in phosphate buffered saline, pH 7.2 . |
| **Storage** | Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing. |
| **Precautions** | AKT1 Antibody (monoclonal) (M03) is for research use only and not for use in diagnostic or therapeutic procedures. |

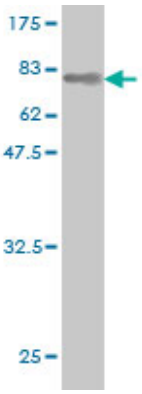
## Background

The serine-threonine protein kinase encoded by the AKT1 gene is catalytically inactive in serum-starved primary and immortalized fibroblasts. AKT1 and the related AKT2 are activated by platelet-derived growth factor. The activation is rapid and specific, and it is abrogated by mutations in the pleckstrin homology domain of AKT1. It was shown that the activation occurs through phosphatidylinositol 3-kinase. In the developing nervous system AKT is a critical mediator of growth factor-induced neuronal survival. Survival factors can suppress apoptosis in a transcription-independent manner by activating the serine/threonine kinase AKT1, which then phosphorylates and inactivates components of the apoptotic machinery. Multiple alternatively spliced transcript variants have been found for this gene.

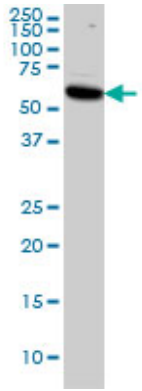
## References

HER-2/AKT expression in upper urinary tract urothelial carcinoma: prognostic implications. Izquierdo L, et al. Anticancer Res, 2010 Jun. PMID 20651405.Variation at the NFATC2 Locus Increases the Risk of Thiazolinedinedione-Induced Edema in the Diabetes REduction Assessment with ramipril and rosiglitazone Medication (DREAM) Study. Bailey SD, et al. Diabetes Care, 2010 Jul 13. PMID 20628086.miR-149* induces apoptosis by inhibiting Akt1 and E2F1 in human cancer cells. Lin RJ, et al. Mol Carcinog, 2010 Aug. PMID 20623644.Genetic variation in a metabolic signaling pathway and colon and rectal cancer risk: mTOR, PTEN, STK11, RPKAA1, PRKAG2, TSC1, TSC2, PI3K and Akt1. Slattery ML, et al. Carcinogenesis, 2010 Sep. PMID 20622004.The clinicopathological and prognostic relevance of pyruvate kinase M2 and pAkt expression in breast cancer. Benesch C, et al. Anticancer Res, 2010 May. PMID 20592362.

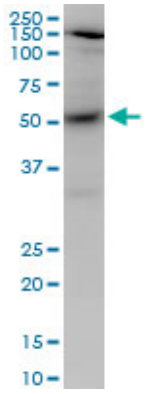
## Images




Antibody Reactive Against Recombinant Protein.Western Blot detection against Immunogen (78.54 KDa) .

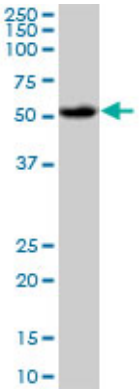


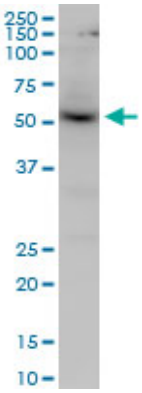

AKT1 monoclonal antibody (M03), clone 2E11 Western Blot analysis of AKT1 expression in HeLa ( (Cat # AT1097a )



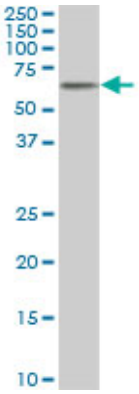

AKT1 monoclonal antibody (M03), clone 2E11. Western Blot analysis of AKT1 expression in PC-12((Cat # AT1097a )

AKT1 monoclonal antibody (M03), clone 2E11. Western Blot analysis of AKT1 expression in HepG2 ( (Cat # AT1097a )

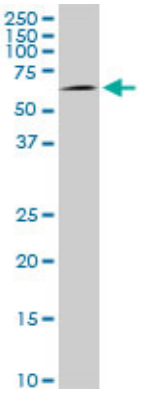



AKT1 monoclonal antibody (M03), clone 2E11. Western Blot analysis of AKT1 expression in Raw 264.7((Cat # AT1097a )



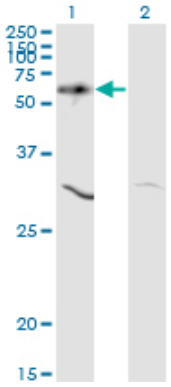

AKT1 monoclonal antibody (M03), clone 2E11. Western Blot analysis of AKT1 expression in MCF-7 ( (Cat # AT1097a )

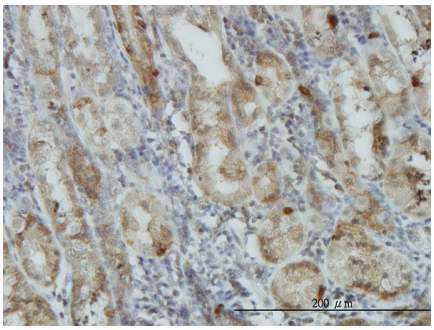



AKT1 monoclonal antibody (M03), clone 2E11. Western Blot analysis of AKT1 expression in NIH/3T3((Cat # AT1097a )

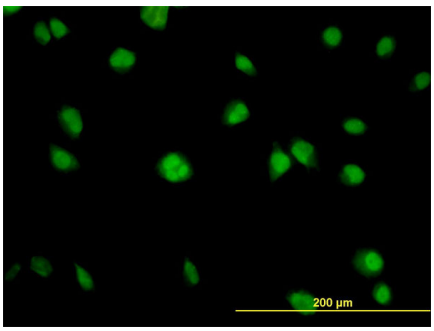
Western Blot analysis of AKT1 expression in transfected 293T cell line by AKT1 monoclonal antibody (M03), clone 2E11.

Lane 1: AKT1 transfected lysate(55.7 KDa).
Lane 2: Non-transfected lysate.

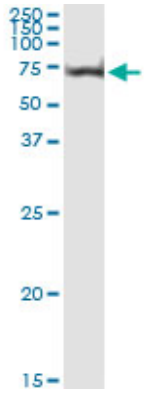


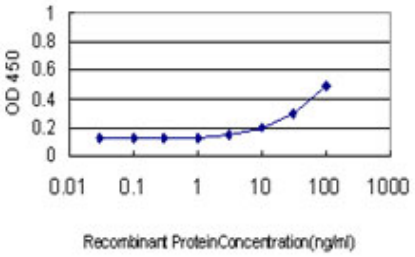

Immunoperoxidase of monoclonal antibody to AKT1 on formalin-fixed paraffin-embedded human stomach. [antibody concentration 3 ug/ml]




Immunofluorescence of monoclonal antibody to AKT1 on HeLa cell. [antibody concentration 20 ug/ml]




Immunoprecipitation of AKT1 transfected lysate using anti-AKT1 monoclonal antibody and Protein A Magnetic Bead (U0007), and immunoblotted with AKT1 MaxPab rabbit polyclonal antibody.




Detection limit for recombinant GST tagged AKT1 is approximately 3ng/ml as a capture antibody.