

Product Datasheet

AKT1 [p Ser473] Antibody (104A282) - BSA Free NB100-56749

Unit Size: 0.1 mg

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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NB100-56749

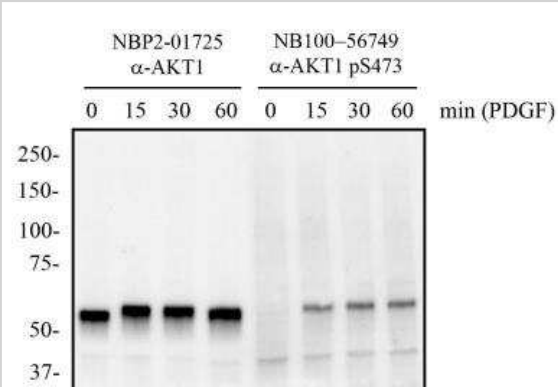
AKT1 [p Ser473] Antibody (104A282) - BSA Free

Product Information	
Unit Size	0.1 mg
Concentration	1 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	104A282
Preservative	0.05% Sodium Azide
Isotype	IgG1 Kappa
Purity	Protein G purified
Buffer	PBS
Target Molecular Weight	55.7 kDa
Product Description	
Description	Novus Biologicals Mouse AKT1 [p Ser473] Antibody (104A282) - BSA Free (NB100-56749) is a monoclonal antibody validated for use in IHC and WB. Anti-AKT1 Antibody: Cited in 15 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Mouse
Gene ID	207
Gene Symbol	AKT1
Species	Human, Mouse, Rat, Rabbit
Reactivity Notes	Rat reactivity reported in scientific literature (PMID: 31092832). Rabbit reactivity reported in scientific literature (PMID: 32936958)
Specificity/Sensitivity	Clone 104A282 detects specifically the Ser473 phosphorylated form of AKT1.
Immunogen	This AKT1 phospho Ser473 antibody was raised against a synthetic peptide containing phosphorylated serines at amino acid residues 473 of human AKT1.
Product Application Details	
Applications	Western Blot, Immunohistochemistry-Paraffin, Immunohistochemistry, Immunohistochemistry-Frozen
Recommended Dilutions	Western Blot, Immunohistochemistry 1:200 - 1:250, Immunohistochemistry-Paraffin 1:200 - 1:250, Immunohistochemistry-Frozen reported by customer review

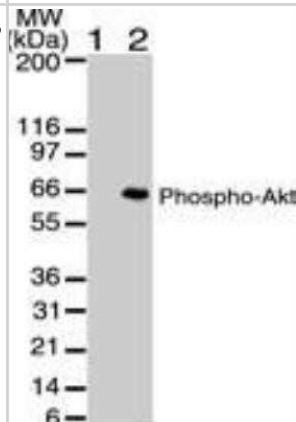


Images

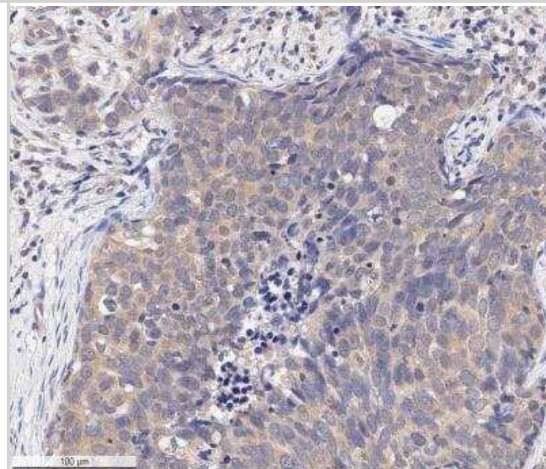
Western Blot: AKT1 [p Ser473] Antibody (104A282) [NB100-56749] - Total protein from mouse 3T3 cells treated with and without PDGF (50 ng/mL) for the indicated times was separated on a 7.5% gel by SDS-PAGE, transferred to PVDF membrane and blocked in 5% non-fat milk in TBST. The membrane was probed with 2.0 ug/mL anti-AKT1 (NBP2-01725) and 2 ug/mL pS473 AKT1 in 1% BSA in TBST and detected with an anti-mouse HRP secondary antibody using chemiluminescence. Note the detection of phosphorylated AKT1 in response to PDGF treatment compared to total AKT1 protein.



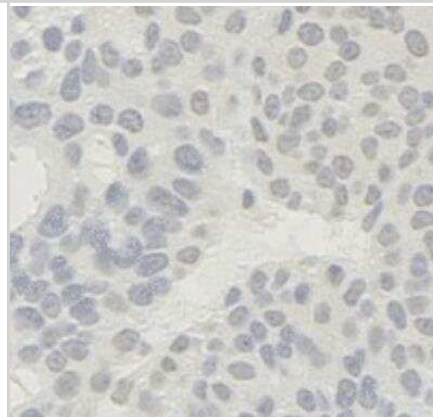
Western Blot: AKT1 [p Ser473] Antibody (104A282) [NB100-56749] - WB of phospho AKT using phospho AKT antibody at 2 ug/mL against untreated (lane 1) and PDGF treated (lane 2) NIH-3T3 lysate. HRP conjugated secondary antibody and ECL substrate solution were used for this test. Image using the Azide and BSA Free form of this antibody.



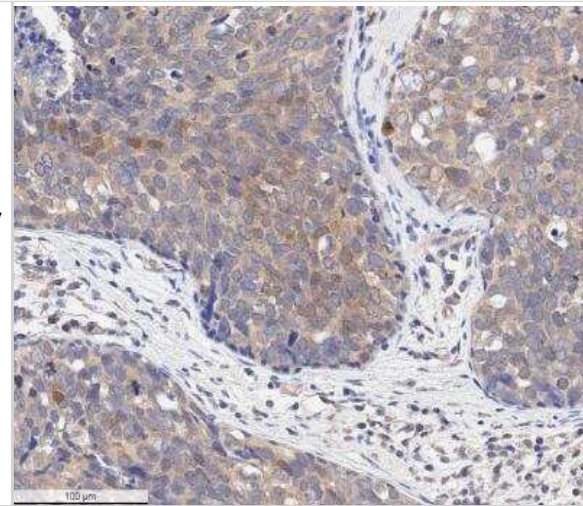
Immunohistochemistry-Paraffin: AKT1 [p Ser473] Antibody (104A282) [NB100-56749] - IHC analysis of an FFPE human breast carcinoma tissue section using 1:250 dilution of phospho Ser473 AKT1 antibody (clone 104A282) on a Bond Rx autostainer (Leica Biosystems). The assay involved 20 minutes of heat induced antigen retrieval (HIER) with 10 mM sodium citrate buffer (pH 6.0) and endogenous peroxidase quenching using peroxide block. The sections were incubated with primary antibody for 30 minutes. Bond Polymer Refine Detection (Leica Biosystems) and DAB were used for signal detection which followed counterstaining with hematoxylin. Whole slide scanning and capturing of representative images (20X) were performed using Aperio AT2 (Leica Biosystems). This antibody generated a diffused cytoplasmic staining of phosphor-AKT (Ser-473) in the cancer cells as well as the stromal cells. Staining was performed by Histowiz.



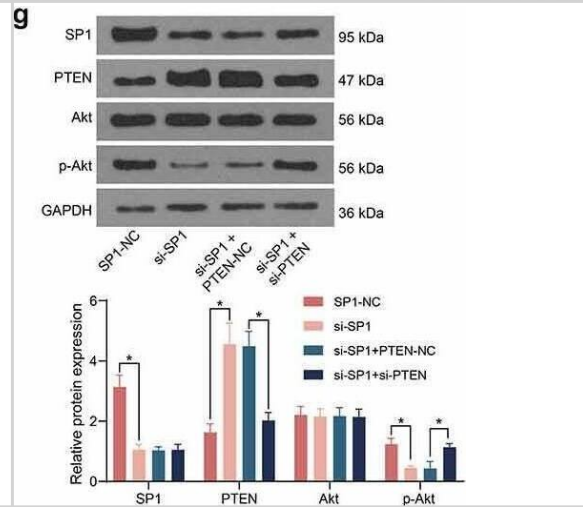
Immunohistochemistry-Frozen: AKT1 [p Ser473] Antibody (104A282) [NB100-56749] - Rat mammary carcinoma tissue section stained with AKT1 [p Ser473] Antibody (104A282). IHC-Fr image submitted by a verified customer review.



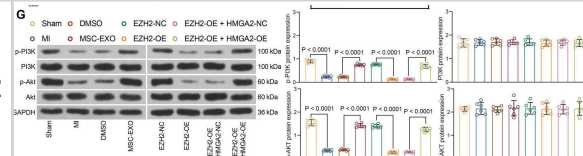
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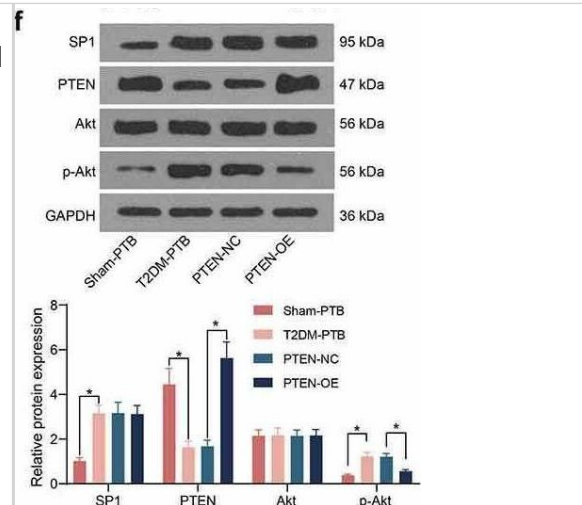
SP1/PTEN mediates lung infection in mice and the activity of the Akt signaling pathway. A, survival days of the mice after si-SP1 and si-PTEN administration ($p < 0.01$, the Kaplan-Meier analysis); B, bacterial load in murine lung tissues examined by CFU analysis ($*p < 0.05$, the one-way ANOVA); C, infiltration of inflammatory cells in murine lung tissues examined by HE staining ($*p < 0.05$, the one-way ANOVA); D, epithelial cell apoptosis in the murine lung tissues after Mtb infection examined by the TUNEL assay ($*p < 0.05$, the one-way ANOVA); E, fibrosis in murine lung tissues determined by Masson's trichrome staining ($*p < 0.05$, the one-way ANOVA); F-G, protein levels of SP1 and PTEN and the Akt phosphorylation in murine lung tissues determined by western blot analysis ($*p < 0.05$, the one-way ANOVA). For animal studies, $n = 6$ in each group. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/35420971>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



EZH2/HMGA2 regulates the PI3K/AKT signaling. MI rats were subjected to injection of EZH2-OE or EZH2-NC (MI + MSC-EXO + EZH2 NC/EZH2 OE) and EZH2-OE + HMGA2-OE or EZH2-OE + HMGA2-NC. A HMGA2 protein expression in myocardial tissues in response to EZH2-OE + HMGA2-OE examined using western blot (Additional file 5: Fig. S5). B Weight change in rats after EZH2-OE + HMGA2-OE treatment. C Changes in HMI in rats after EZH2-OE + HMGA2-OE treatment. D Measurement of Dd, Sd, and LVEF by echocardiography at 2 weeks after LAD in rats. E Measurement of LVMI by echocardiography in rats. F KEGG pathway analysis of gene enrichment pathways [29]. G Changes in PI3K/AKT pathway in rat myocardium examined using western blot (Additional file 6: Fig. S6). All data are expressed as mean \pm SD ($n = 6$ /group, $*p < 0.05$ vs. Sham, DMSO, MI + MSC-EXO + EZH2-NC or EZH2-OE + HMGA2-NC group determined by unpaired t test or one-way ANOVA) Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/35264108>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



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Publications

Jiao W, Hao J, Xie y et al. EZH2 mitigates the cardioprotective effects of mesenchymal stem cell-secreted exosomes against infarction via HMGA2-mediated PI3K/AKT signaling BMC cardiovascular disorders 2022-03-09 [PMID: 35264108]

Shih-Hong Khoo, Pei-Ru Wu, Kun-Tu Yeh, Shih-Lan Hsu, Chi-Hao Wu Biological and clinical significance of the AGE-RAGE axis in the aggressiveness and prognosis of prostate cancer Journal of Food and Drug Analysis 2023-01-01 [PMID: 38526823]

Liu Z, Du J, Ren J et al. miR-183-96-182 clusters alleviated ox-LDL-induced vascular endothelial cell apoptosis in vitro by targeting FOXO1 RSC Adv 2022-05-13 [PMID: 35547044]

Zhao H, Shi L, Wang X et al. Sp1 transcription factor represses transcription of phosphatase and tensin homolog to aggravate lung injury in mice with type 2 diabetes mellitus-pulmonary tuberculosis Bioengineered 2022-04-01 [PMID: 35420971] (WB, Mouse)

Tacey A, Millar S, Qaradakh T et al. Undercarboxylated osteocalcin has no adverse effect on endothelial function in rabbit aorta or human vascular cells J. Cell. Physiol. 2020-09-16 [PMID: 32936958] (IHC-P, Rabbit)

Mishra P, Paital B, Jena S et al. Possible activation of NRF2 by Vitamin E/Curcumin against altered thyroid hormone induced oxidative stress via NF kappa B/AKT/mTOR/KEAP1 signalling in rat heart Sci Rep 2019-05-15 [PMID: 31092832] (WB, Rat)

Zhou X, Liu S, Lin X et al. Metformin Inhibit Lung Cancer Cell Growth and Invasion in Vitro as Well as Tumor Formation in Vivo Partially by Activating PP2A Med. Sci. Monit. 2019-01-29 [PMID: 30693913] (WB, Human)

Meads MB, Fang B, Mathews L et al. Targeting PYK2 mediates microenvironment-specific cell death in multiple myeloma. Oncogene 2015-09-21 [PMID: 26387544] (WB, Human)

Tagoug Ines, Sauty De Chalon Amelie, Dumontet Charles. Inhibition of IGF-1 signalling enhances the apoptotic effect of AS602868, an IKK2 inhibitor, in multiple myeloma cell lines. PLoS One. 2011-01-01 [PMID: 21799925] (WB, Human)

Wedel S, Hudak L, Seibel JM et al. Inhibitory effects of the HDAC inhibitor valproic acid on prostate cancer growth are enhanced by simultaneous application of the mTOR inhibitor RAD001. Life Sci. 2011-02-28 [PMID: 21192952] (WB)

Details:

Phosphorylated Akt1 Ser473 (IMG-187A). WB: PC-3, DU-145, LNCaP cell lines treated with either RAD001 or VPA, Fig 5.

Nair AS, Shishodia S, Ahn KS et al. Deguelin, an Akt inhibitor, suppresses IkappaBalpha kinase activation leading to suppression of NF-kappaB-regulated gene expression, potentiation of apoptosis, and inhibition of cellular invasion. J Immunol. 2006-10-15 [PMID: 17015749]

Details:

Suppression of NF-kB activation by curcumin leads to inhibition of expression of cyclo-oxygenase-2 and matrix metalloproteinase-9 in human articular chondrocytes; Implications for the treatment of osteoarthritis. Shakibaei M, T John, G Schulze-Tanzil, I

Elamin MH, Shinwari Z, Hendrayani SF et al. Curcumin inhibits the Sonic Hedgehog signaling pathway and triggers apoptosis in medulloblastoma cells. Mol Carcinog. 2010-03-01 [PMID: 20025076]

More publications at <http://www.novusbio.com/NB100-56749>



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NB7539	Goat anti-Mouse IgG (H+L) Secondary Antibody [HRP]
NBP1-43319-0.5mg	Mouse IgG1 Kappa Isotype Control (P3.6.2.8.1)

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