

# 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.

[www.novusbio.com](http://www.novusbio.com)



[technical@novusbio.com](mailto:technical@novusbio.com)

**Reviews: 2 Publications: 15**

Protocols, Publications, Related Products, Reviews, Research Tools and Images at:  
[www.novusbio.com/NB100-56749](http://www.novusbio.com/NB100-56749)

Updated 10/23/2024 v.20.1

**Earn rewards for product  
reviews and publications.**

Submit a publication at [www.novusbio.com/publications](http://www.novusbio.com/publications)

Submit a review at [www.novusbio.com/reviews/destination/NB100-56749](http://www.novusbio.com/reviews/destination/NB100-56749)



**NB100-56749**

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

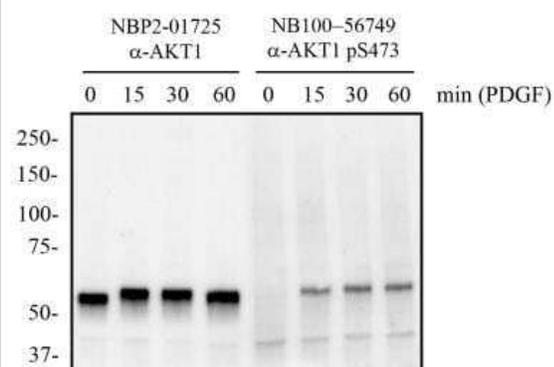
Product Information	
Unit Size	0.1 mg
Concentration	1 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	104A282
Preservative	0.05% Sodium Azide
Isotype	IgG1 Kappa
Purity	Protein G purified
Buffer	PBS
Target Molecular Weight	55.7 kDa

Product Description	
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.

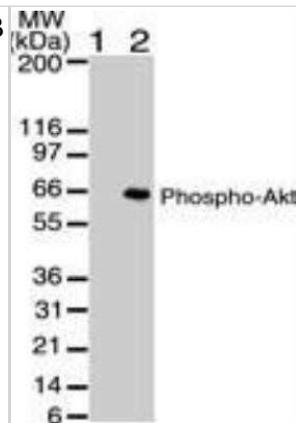
Product Application Details	
Applications	Western Blot, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin
Recommended Dilutions	Western Blot, Immunohistochemistry 1:200 - 1:250, Immunohistochemistry-Paraffin 1:200 - 1:250, Immunohistochemistry-Frozen reported by customer review

**Images**

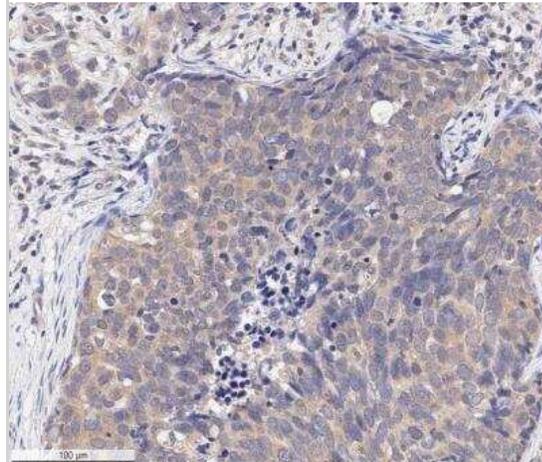
Western Blot: AKT1 [p Ser473] Antibody (104A282) [NB100-56749] - Total protein from mouse 3T3 cells treated with and without PDGF (50 ng/mL) for the indicated times was separated on a 7.5% gel by SDS-PAGE, transferred to PVDF membrane and blocked in 5% non-fat milk in TBST. The membrane was probed with 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.



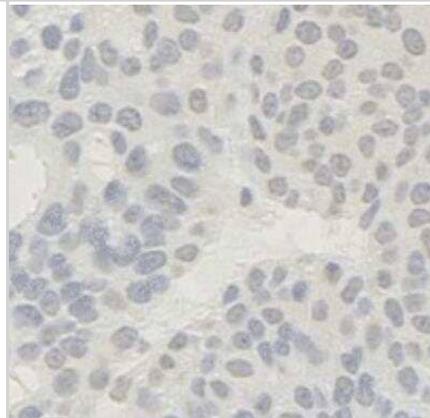
Western Blot: AKT1 [p Ser473] Antibody (104A282) [NB100-56749] - WB of phospho AKT using phospho AKT antibody at 2 ug/mL against untreated (lane 1) and PDGF treated (lane 2) NIH-3T3 lysate. HRP conjugated secondary antibody and ECL substrate solution were used for this test. Image using the Azide and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



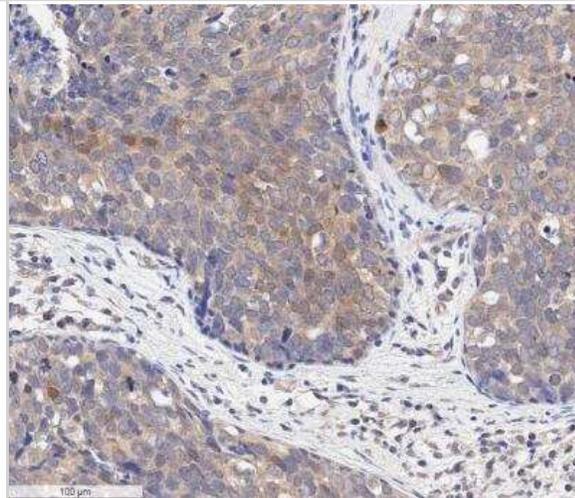
Immunohistochemistry-Paraffin: AKT1 [p Ser473] Antibody (104A282) [NB100-56749] - IHC analysis of an FFPE human breast carcinoma tissue section using 1:250 dilution of phospho Ser473 AKT1 antibody (clone 104A282) on a Bond Rx autostainer (Leica Biosystems). The assay involved 20 minutes of heat induced 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.



Immunohistochemistry-Paraffin: AKT1 [p Ser473] Antibody (104A282) [NB100-56749] - IHC analysis of an FFPE human breast carcinoma tissue section using 1:250 dilution of pSer473 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. Some cancer cells depicted nuclear staining also. Staining was performed by Histowiz.



## Publications

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]

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]

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>



### **Novus Biologicals USA**

10730 E. Briarwood Avenue  
Centennial, CO 80112  
USA  
Phone: 303.730.1950  
Toll Free: 1.888.506.6887  
Fax: 303.730.1966  
nb-customerservice@bio-techne.com

### **Bio-Techne Canada**

21 Canmotor Ave  
Toronto, ON M8Z 4E6  
Canada  
Phone: 905.827.6400  
Toll Free: 855.668.8722  
Fax: 905.827.6402  
canada.inquires@bio-techne.com

### **Bio-Techne Ltd**

19 Barton Lane  
Abingdon Science Park  
Abingdon, OX14 3NB, United Kingdom  
Phone: (44) (0) 1235 529449  
Free Phone: 0800 37 34 15  
Fax: (44) (0) 1235 533420  
info.EMEA@bio-techne.com

### **General Contact Information**

www.novusbio.com  
Technical Support: nb-technical@bio-techne.com  
Orders: nb-customerservice@bio-techne.com  
General: novus@novusbio.com

### **Products Related to NB100-56749**

---

HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB720-B	Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin]
NBP1-43319-0.5mg	Mouse IgG1 Kappa Isotype Control (P3.6.2.8.1)
NB100-56749C	AKT1 [p Ser473] Antibody (104A282) [DyLight 650]

---

### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

For more information on our 100% guarantee, please visit [www.novusbio.com/guarantee](http://www.novusbio.com/guarantee)

Earn gift cards/discounts by submitting a review: [www.novusbio.com/reviews/submit/NB100-56749](http://www.novusbio.com/reviews/submit/NB100-56749)

Earn gift cards/discounts by submitting a publication using this product:  
[www.novusbio.com/publications](http://www.novusbio.com/publications)

