

# Product Datasheet

## CaM Kinase II alpha Antibody (6G9) - BSA Free NB100-1983

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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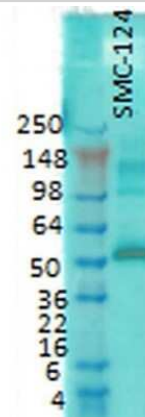
**NB100-1983****CaM Kinase II alpha Antibody (6G9) - BSA Free**

<b>Product Information</b>	
<b>Unit Size</b>	0.1 mg
<b>Concentration</b>	1 mg/ml
<b>Storage</b>	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
<b>Clonality</b>	Monoclonal
<b>Clone</b>	6G9
<b>Preservative</b>	0.09% Sodium Azide
<b>Isotype</b>	IgG1
<b>Purity</b>	Protein G purified
<b>Buffer</b>	PBS (pH 7.4), 50% Glycerol
<b>Target Molecular Weight</b>	54 kDa
<b>Product Description</b>	
<b>Description</b>	Novus Biologicals Mouse CaM Kinase II alpha Antibody (6G9) - BSA Free (NB100-1983) is a monoclonal antibody validated for use in IHC, WB, ELISA, ICC/IF and IP. Anti-CaM Kinase II alpha Antibody: Cited in 16 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
<b>Host</b>	Mouse
<b>Gene ID</b>	815
<b>Gene Symbol</b>	CAMK2A
<b>Species</b>	Human, Mouse, Rat, Bovine, Xenopus
<b>Reactivity Notes</b>	Mouse reactivity reported in scientific literature (PMID: 28421537). Xenopus reactivity reported in scientific literature (PMID: 29412139). Please note that this antibody is reactive to Mouse and derived from the same host, Mouse. Mouse-On-Mouse blocking reagent may be needed for IHC and ICC experiments to reduce high background signal. You can find these reagents under catalog numbers PK-2200-NB and MP-2400-NB. Please contact Technical Support if you have any questions.
<b>Specificity/Sensitivity</b>	Detects approx 50-60kDa. Recognizes both phosphorylated and non-phosphorylated forms.
<b>Immunogen</b>	Partially purified rat CaMKII
<b>Product Application Details</b>	
<b>Applications</b>	Western Blot, Immunohistochemistry-Paraffin, ELISA, Immunocytochemistry/Immunofluorescence, Immunohistochemistry, Immunoprecipitation, Radioimmunoassay
<b>Recommended Dilutions</b>	Western Blot 1:10000, ELISA, Immunohistochemistry 1:2000, Immunocytochemistry/ Immunofluorescence 1:50, Immunoprecipitation, Immunohistochemistry-Paraffin 1:10-1:500, Radioimmunoassay
<b>Application Notes</b>	0.1 ug/ml was sufficient for detection of CamKII in 20 ug rat brain tissue extract by colorimetric immunoblot analysis using Goat Anti-Mouse IgG:AP as the secondary.

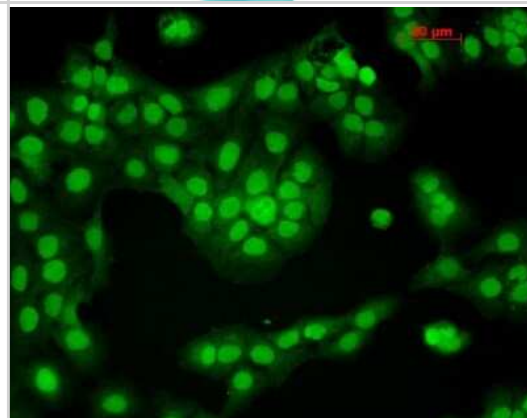


## Images

Western Blot: CaM Kinase II alpha Antibody (6G9) [NB100-1983] - Western Blot analysis of Rat brain membrane lysate showing detection of CaM Kinase II alpha protein using Mouse Anti-CaM Kinase II alpha Monoclonal Antibody, Clone 6G9 (NB100-1983). Primary Antibody: Mouse Anti-CaM Kinase II alpha Monoclonal Antibody (NB100-1983) at 1:1000.



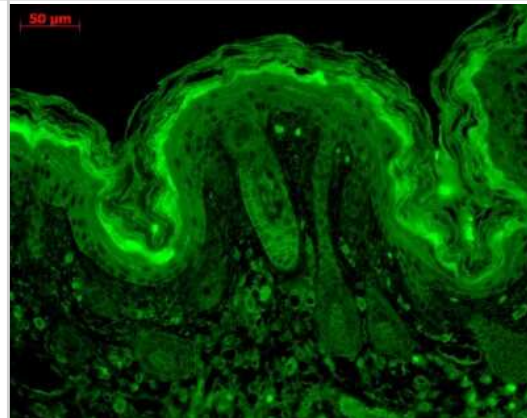
Immunocytochemistry/Immunofluorescence: CaM Kinase II alpha Antibody (6G9) [NB100-1983] - Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-CaM Kinase II alpha Monoclonal Antibody, Clone 6G9 (NB100-1983). Tissue: HaCaT cells. Species: Human. Fixation: Cold 100% methanol for 10 minutes at -20C. Primary Antibody: Mouse Anti-CaM Kinase II alpha Monoclonal Antibody (NB100-1983) at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:50 for 1 hour at RT. Localization: Nuclear Staining.



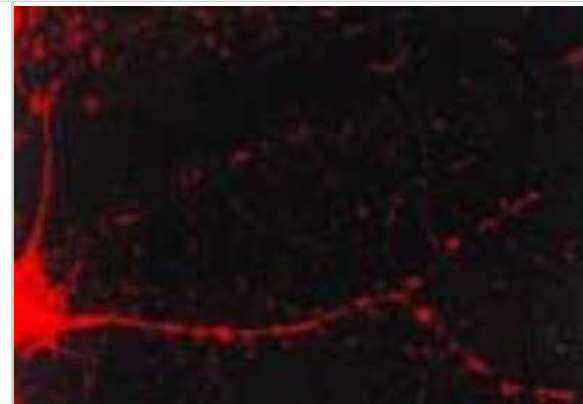
Immunohistochemistry: CaM Kinase II alpha Antibody (6G9) [NB100-1983] - Immunohistochemistry analysis using Mouse Anti-CaM Kinase II alpha Monoclonal Antibody, Clone 6G9 (NB100-1983). Tissue: colon carcinoma. Species: Human. Fixation: Formalin. Primary Antibody: Mouse Anti-CaM Kinase II alpha Monoclonal Antibody (NB100-1983) at 1:10000 for 12 hours at 4C. Secondary Antibody: Biotin Goat Anti-Mouse at 1:2000 for 1 hour at RT. Counterstain: Mayer Hematoxylin (purple/blue) nuclear stain at 200 I for 2 minutes at RT. Magnification: 40x.



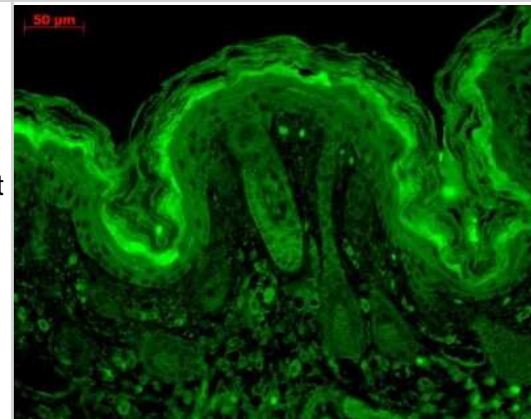
Immunocytochemistry/Immunofluorescence: CaM Kinase II alpha Antibody (6G9) [NB100-1983] - Tissue: backskin. Species: Mouse. Fixation: Bouins Fixative and paraffin-embedded. Primary Antibody: Mouse Anti-CaMKII Monoclonal Antibody at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:50 for 1 hour at RT. Localization: Hair follicles, epidermis.



Immunocytochemistry/Immunofluorescence: CaM Kinase II alpha Antibody (6G9) [NB100-1983] - Tissue: dissociated hippocampal neurons. Species: Mouse. Fixation: Cold 4% paraformaldehyde/0.2% glutaraldehyde in 0.1M sodium phosphate buffer. Primary Antibody: Mouse Anti-CaMKII Monoclonal Antibody at 1:1000 for 12 hours at 4C. Secondary Antibody: FITC Goat Anti-Mouse IgG (green) at 1:50 for 30 minutes at RT. Magnification: 10X. Courtesy of: Mary Kennedy, Caltech.



Immunohistochemistry: CaM Kinase II alpha Antibody (6G9) [NB100-1983] - Immunohistochemistry analysis using Mouse Anti-CaM Kinase II alpha Monoclonal Antibody, Clone 6G9 (NB100-1983). Tissue: backskin. Species: Mouse. Fixation: Bouin's Fixative and paraffin-embedded. Primary Antibody: Mouse Anti-CaM Kinase II alpha Monoclonal Antibody (NB100-1983) at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:50 for 1 hour at RT. Localization: Hair follicles, epidermis.



## Publications

Rigter PMF, de Konink C, van Woerden GM. Loss of CAMK2G affects intrinsic and motor behavior but has minimal impact on cognitive behavior *Frontiers in Neuroscience* 2023-01-06 [PMID: 36685241]

N Micali, SK Kim, M Diaz-Busta, G Stein-O'Br, S Seo, JH Shin, BG Rash, S Ma, Y Wang, NA Olivares, JI Arellano, KR Maynard, EJ Fertig, AJ Cross, RW Bürli, NJ Brandon, DR Weinberger, JG Chenoweth, DJ Hoepfner, N Sestan, P Rakic, C Colantuoni, RD McKay Variation of Human Neural Stem Cells Generating Organizer States In  $\frac{1}{2}$  Vitro before Committing to Cortical Excitatory or Inhibitory Neuronal Fates *Cell Rep*, 2020-05-05;31(5):107599. 2020-05-05 [PMID: 32375049]

Chen M, Wang C, Lin Y et al. Dorsal raphe nucleus-hippocampus serotonergic circuit underlies the depressive and cognitive impairments in 5xFAD male mice *Transl Neurodegener* 2024-07-24 [PMID: 39044270]

Ameen SS, Griem-Krey N, Dufour A et al. N-Terminomic Changes of Neurons During Excitotoxicity Reveal Proteolytic Events Associated with Synaptic Dysfunctions and Potential Targets for Neuroprotection *Molecular & cellular proteomics : MCP* 2023-04-06 [PMID: 37030595] (WB, Mouse)

Griem-Krey N, Gauger SJ, Gowing EK et al. The CaMKIIa hub ligand Ph-HTBA promotes neuroprotection after focal ischemic stroke by a distinct molecular interaction *Biomedicine & pharmacotherapy = Biomedecine & pharmacotherapie* 2022-10-20 [PMID: 36274464] (WB, Mouse)

Rigter PMF, Wallaard I, Aghadavoud Jolfaei M et al. Adult Camk2a gene reinstatement restores the learning and plasticity deficits of Camk2a knockout mice *iScience* 2022-11-18 [PMID: 36304100] (IP, IF/IHC, WB, Mouse)

Schiapparelli LM, Sharma P, He HY et al. Proteomic screen reveals diverse protein transport between connected neurons in the visual system *Cell reports* 2022-01-25 [PMID: 35081342] (WB, Rat)

Schiapparelli LM, Shah SH, Ma Y et al. The Retinal Ganglion Cell Transportome Identifies Proteins Transported to Axons and Presynaptic Compartments in the Visual System *In Vivo Cell Rep* 2019-08-13 [PMID: 31412257] (WB, Rat)

Koene LMC, van Grondelle SE, Proietti Onori M et al. Effects of antiepileptic drugs in a new TSC/mTOR-dependent epilepsy mouse model *Ann Clin Transl Neurol* 2019-07-01 [PMID: 31353861] (IF/IHC, Mouse)

Fang Q, Li Z, Huang GD et al. Traumatic Stress Produces Distinct Activations of GABAergic and Glutamatergic Neurons in Amygdala. *Front Neurosci* 2018-08-21 [PMID: 30186100] (ICC/IF, Rat)

Liu H. H, McClatchy D. B, et al. Role of the visual experience-dependent nascent proteome in neuronal plasticity. *Elife* 2018-02-07 [PMID: 29412139] (WB, Xenopus)

Li Y, You QL, Zhang SR et al. Satb2 Ablation Impairs Hippocampus-Based Long-Term Spatial Memory and Short-Term Working Memory and Immediate Early Genes (IEGs)-Mediated Hippocampal Synaptic Plasticity. *Mol. Neurobiol.* 2017-04-18 [PMID: 28421537] (WB, ICC/IF, Mouse)

More publications at <http://www.novusbio.com/NB100-1983>





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### **Products Related to NB100-1983**

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NB820-59657	Mouse Brain Whole Tissue Lysate (Adult Whole Normal)
HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB720-B	Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin]
NBP1-97005-0.5mg	Mouse IgG1 Isotype Control (MG1)

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### **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.

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