

# Product Datasheet

## CaM Kinase II alpha Antibody NBP1-51945

Unit Size: 0.1 mg

Store at -20C. Avoid freeze-thaw cycles.

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**NBP1-51945**

## CaM Kinase II alpha Antibody

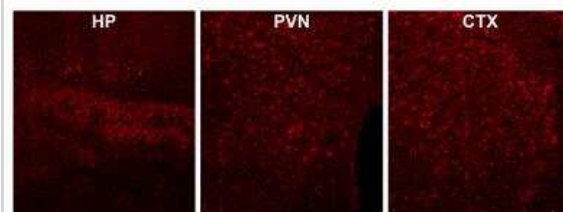
Product Information	
Unit Size	0.1 mg
Concentration	0.5 mg/ml
Storage	Store at -20C. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	Tris saline (20 mM Tris pH 7.3, 150 mM NaCl), 0.5% BSA

Product Description	
Description	Novus Biologicals Goat CaM Kinase II alpha Antibody (NBP1-51945) is a polyclonal antibody validated for use in IHC, WB, ELISA, Flow and ICC/IF. Anti-CaM Kinase II alpha Antibody: Cited in 3 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Goat
Gene ID	815
Gene Symbol	CAMK2A
Species	Human, Mouse, Rat
Specificity/Sensitivity	This antibody is expected to recognize both reported isoforms (NP_057065.2 (CAMK2A) and NP_001280099.1 (CAMK2B)).
Immunogen	Peptide with sequence C-PRTAQSEETRVWHR, from the internal region of the protein sequence according to NP_057065.2; NP_001280099.1.

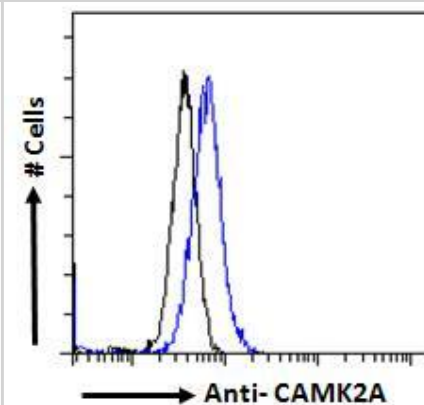
Product Application Details	
Applications	Western Blot, Immunohistochemistry-Paraffin, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Peptide ELISA
Recommended Dilutions	Western Blot 0.3-1 ug/ml, Flow Cytometry 10 ug/ml, Immunohistochemistry 3 - 6 ug/ml, Immunocytochemistry/ Immunofluorescence 10 ug/ml, Immunohistochemistry-Paraffin 3 - 6 ug/ml, Peptide ELISA Detection limit 1:64000
Application Notes	WB: Approx. 60kDa band observed in Human Cerebellum and approx 50+60kDa in Mouse and Rat Brain lysates, corresponding to CAMK2alpha and CAMK2beta respectively (calculated MW of 55.3kDa according to Human NP_057065.2 and 54.1kDa according to Mouse NP_803126.1 and Rat NP_037052.1 subunit Alpha and 60.4kDa according to Human NP_001280099.1, Mouse : NP_031621.3 and Rat NP_068507.2 subunit beta).. These observed molecular weights are routinely observed by other sources.and were successfully blocked by incubation with the immunizing peptide. Primary incubation 1 hour at room temperature. IHC-P: Human brain cortex shows granular staining in the periphery of pyramidal cell bodies.

## Images

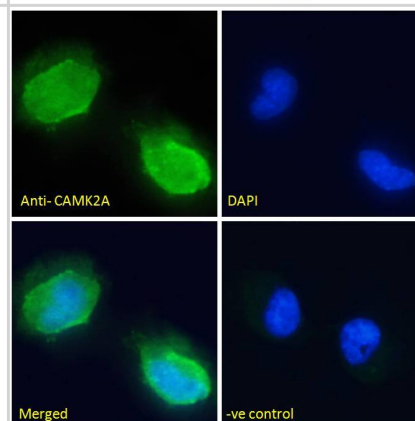
**Immunohistochemistry:** CaM Kinase II alpha Antibody [NBP1-51945] - IHC using CamKII antibody from goat in 3% PFA perfused mouse brain. 1:100 dilution clearly provides cytosolic CamK II immunoreactivity in whole brain regions, including the hippocampus (HP), cortex (CTX) and paraventricular region (PVN). Image from verified customer review.



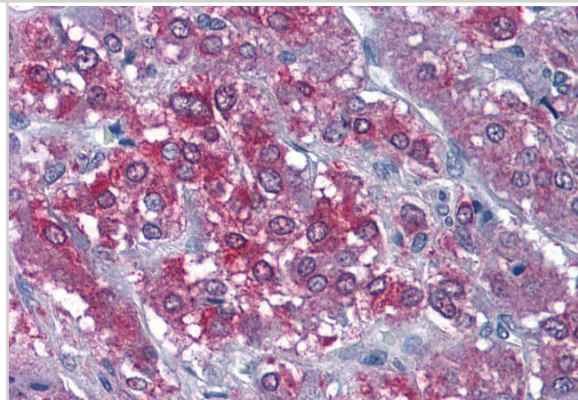
**Flow Cytometry:** CaM Kinase II alpha Antibody [NBP1-51945] - Flow cytometric analysis of paraformaldehyde fixed Kelly cells (blue line), permeabilized with 0.5% Triton. Primary incubation 1hr (10ug/ml) followed by Alexa Fluor 488 secondary antibody (1ug/ml). IgG control: Unimmunized goat IgG (black line) followed by Alexa Fluor 488 secondary antibody.



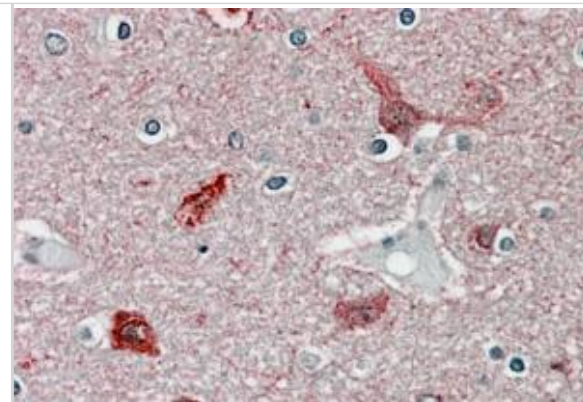
**Immunocytochemistry/Immunofluorescence:** CaM Kinase II alpha Antibody [NBP1-51945] - Immunofluorescence analysis of paraformaldehyde fixed U251 cells, permeabilized with 0.15% Triton. Primary incubation 1hr (10ug/ml) followed by Alexa Fluor 488 secondary antibody (2ug/ml), showing membrane staining. The nuclear stain is DAPI (blue). Negative control: Unimmunized goat IgG (10ug/ml) followed by Alexa Fluor 488 secondary antibody (2ug/ml).



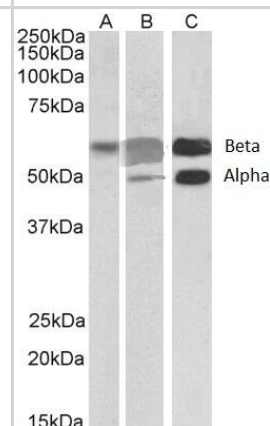
**Immunohistochemistry-Paraffin:** CaM Kinase II alpha Antibody [NBP1-51945] - (3.75ug/ml) staining of paraffin embedded Human Adrenal Gland. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.



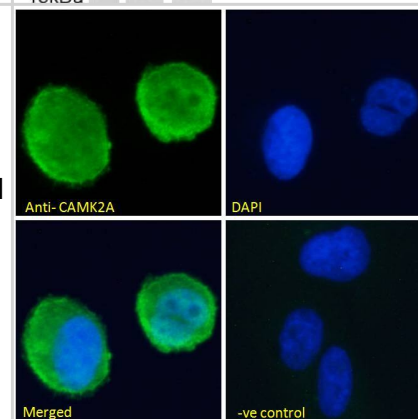
Immunohistochemistry-Paraffin: CaM Kinase II alpha Antibody [NBP1-51945] - (3.8ug/ml) staining of paraffin embedded Human Brain Cortex. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.



Western Blot: CaM Kinase II alpha Antibody [NBP1-51945] - (0.3ug/ml) staining of Human Cerebellum (A), Mouse (B) and Rat (C) Brain lysate (35ug protein in RIPA buffer). Detected by chemiluminescence



Immunocytochemistry/Immunofluorescence: CaM Kinase II alpha Antibody [NBP1-51945] - Immunofluorescence analysis of paraformaldehyde fixed U2OS cells, permeabilized with 0.15% Triton. Primary incubation 1hr (10ug/ml) followed by Alexa Fluor 488 secondary antibody (2ug/ml), showing membrane staining. The nuclear stain is DAPI (blue). Negative control: Unimmunized goat IgG (10ug/ml) followed by Alexa Fluor 488 secondary antibody (2ug/ml).



## Publications

Li X, Xiong M, Gao Y et Al. Upregulation of Calhm2 in the anterior cingulate cortex contributes to the maintenance of bilateral mechanical allodynia and comorbid anxiety symptoms in inflammatory pain conditions Brain Res Bull 2023-11-27 [PMID: 37926398]

Shin BC, Cepeda C, Maria Estrada-Sanchez A et al. Neural Deletion of Glucose Transporter Isoform 3 Creates Distinct Postnatal and Adult Neurobehavioral Phenotypes. J. Neurosci. 2018-09-19 [PMID: 30232223] (ICC/IF, Mouse)

Lee CW, Lin CC, Luo SF et al. Tumor necrosis factor-alpha enhances neutrophil adhesiveness: induction of vascular cell adhesion molecule-1 via activation of Akt and CaM kinase II and modifications of histone acetyltransferase and histone deacetylase 4 in human tracheal smooth muscle cells. Mol Pharmacol 2008-05-01 [PMID: 18227124]



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### **Products Related to NBP1-51945**

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NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
HAF017	Rabbit anti-Goat IgG Secondary Antibody [HRP (Horseradish Peroxidase)]
HAF109	Donkey anti-Goat IgG Secondary Antibody [HRP (Horseradish Peroxidase)]
NB410-28088-1mg	Goat IgG Isotype Control

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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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