

# Product Datasheet

## STEP Antibody (23E5) NB300-202

Unit Size: 0.1 ml

Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.

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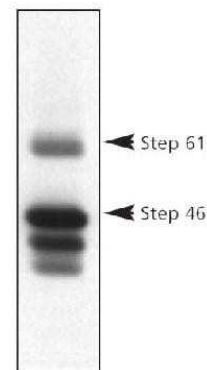
**NB300-202****STEP Antibody (23E5)**

<b>Product Information</b>	
<b>Unit Size</b>	0.1 ml
<b>Concentration</b>	This product is unpurified. The exact concentration of antibody is not quantifiable.
<b>Storage</b>	Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.
<b>Clonality</b>	Monoclonal
<b>Clone</b>	23E5
<b>Preservative</b>	0.09% Sodium Azide
<b>Isotype</b>	IgG1
<b>Purity</b>	Unpurified
<b>Buffer</b>	Ascites
<b>Product Description</b>	
<b>Host</b>	Mouse
<b>Gene ID</b>	84867
<b>Gene Symbol</b>	PTPN5
<b>Species</b>	Human, Mouse, Rat
<b>Specificity/Sensitivity</b>	NB300-202 is specific for STEP61, STEP46, STEP38, and STEP20.
<b>Immunogen</b>	A synthetic peptide of rat STEP46 (amino acids 57-74: MCTPGCNEEGFGYLVSPR)
<b>Product Application Details</b>	
<b>Applications</b>	Western Blot, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, Immunoprecipitation
<b>Recommended Dilutions</b>	Western Blot 1:1000 -1:2000, Immunohistochemistry 1:100-1:500, Immunocytochemistry/ Immunofluorescence 1:100-1:500, Immunoprecipitation 1:50, Immunohistochemistry-Paraffin, Immunohistochemistry-Frozen 1:100-1:500
<b>Application Notes</b>	This STEP (23E5) antibody is useful for Western blot, Immunoprecipitation, Immunocytochemistry/Immunofluorescence and Immunohistochemistry on frozen sections. By Western Blot, this STEP antibody recognizes bands at ~64-66, 46, 37, and 33 kDa, in rat brain tissues. Neuronal cells have been used for ICC/IF and frozen brain sections have been used for IHC.

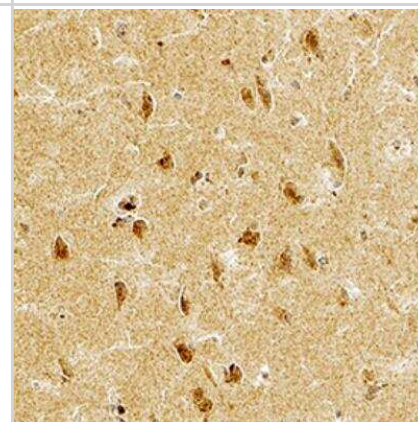


## Images

Western Blot: STEP Antibody (23E5) [NB300-202] - Analysis of STEP protein in striatal rat protein homogenates



Immunohistochemistry-Paraffin: STEP Antibody (23E5) [NB300-202] - STEP was detected in immersion fixed paraffin-embedded sections of human brain basal ganglia using Mouse Anti-Human STEP (23E5) Monoclonal Antibody (Catalog # NB300-202) at 1:100 for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC001). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to the cytoplasm in neurons.



## Publications

He RB, Li L, Liu LZ, Ma YJ et Al. Ceftriaxone improves impairments in synaptic plasticity and cognitive behavior in APP/PS1 mouse model of Alzheimer's disease by inhibiting extrasynaptic NMDAR-STEP(61) signaling J Neurochem 2023-06-07 [PMID: 37284938]

Paramasivam, P;Choi, SW;Poddar, R;Paul, S; Impairment of neuronal tyrosine phosphatase STEP worsens post-ischemic inflammation and brain injury under hypertensive condition Journal of neuroinflammation 2024-10-22 [PMID: 39438980]

Wang C, Jiang Q, Zhao P Sevoflurane exposure during the second trimester induces neurotoxicity in offspring rats by hyperactivation of PARP-1 Psychopharmacology 2022-07-20 [PMID: 35859039] (WB, Rat)

Rajagopal S, Poddar R, Paul S Tyrosine phosphatase STEP is a key regulator of glutamate-induced prostaglandin E2 release from neurons The Journal of biological chemistry 2021-07-08 [PMID: 34246631] (WB)

Rajagopal S, Yang C, DeMars KM, et al. Regulation of post-ischemic inflammatory response: A novel function of the neuronal tyrosine phosphatase STEP Brain, behavior, and immunity 2021-01-08 [PMID: 33422638] (WB, Mouse)

Wang Y, Liu Y, Bi X, Baudry M Calpain-1 and Calpain-2 in the Brain: New Evidence for a Critical Role of Calpain-2 in Neuronal Death Cells 2020-12-16 [PMID: 33339205] (WB)

Hu P, Maita I, Phan ML et al. Early-life stress alters affective behaviors in adult mice through persistent activation of CRH-BDNF signaling in the oval bed nucleus of the stria terminalis Transl Psychiatry 2020-11-11 [PMID: 33177511] (IF/IHC, Mouse)

Huang L, Peng Z, Lu C et al. Ginsenoside Rg1 alleviates repeated alcohol exposure-induced psychomotor and cognitive deficits Chin Med 2020-05-07 [PMID: 32411290] (WB, Mouse)

Selective reduction of APP-BACE1 activity improves memory via NMDA NR2B receptor-mediated mechanisms in aged PDAPP mice. Evans C, Thomas R, Freeman T et al. Neurobiol Aging [PMID: 30572184] (WB, Mouse)

Hu P, Liu J, Maita I et al. Chronic Stress Induces Maladaptive Behaviors by Activating Corticotropin-Releasing Hormone Signaling in the Mouse Oval Bed Nucleus of the Stria Terminalis J. Neurosci. 2020-02-11 [PMID: 32054675] (IHC-Fr, Mouse)

Carvajal FJ, Mira RG, Rovegno M et al. Age-related NMDA signaling alterations in SOD2 deficient mice. Biochim. Biophys. Acta. 2018-03-22 [PMID: 29577983] (ICC/IF)

Pose-Utrilla J, Garcia-Guerra L, Del Puerto A et al. Excitotoxic inactivation of constitutive oxidative stress detoxification pathway in neurons can be rescued by PKD1. Nat Commun 2017-12-22 [PMID: 29273751] (Mouse)

More publications at <http://www.novusbio.com/NB300-202>





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### **Products Related to NB300-202**

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)
H00084867-P01-10ug	Recombinant Human STEP GST (N-Term) Protein

### **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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