

# Product Datasheet

## CACNA2D1 Antibody (20A)

### NB120-2864

Unit Size: 100 uL

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

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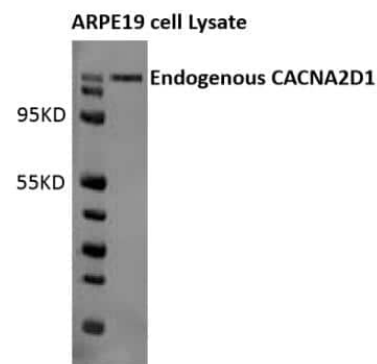
**NB120-2864****CACNA2D1 Antibody (20A)**

<b>Product Information</b>	
<b>Unit Size</b>	100 uL
<b>Concentration</b>	This product is unpurified. The exact concentration of antibody is not quantifiable.
<b>Storage</b>	Store at -20C. Avoid freeze-thaw cycles.
<b>Clonality</b>	Monoclonal
<b>Clone</b>	20A
<b>Preservative</b>	0.05% Sodium Azide
<b>Isotype</b>	IgG2a
<b>Purity</b>	Unpurified
<b>Buffer</b>	Ascites
<b>Product Description</b>	
<b>Host</b>	Mouse
<b>Gene ID</b>	781
<b>Gene Symbol</b>	CACNA2D1
<b>Species</b>	Human, Mouse, Rat, Porcine, Guinea Pig, Rabbit
<b>Reactivity Notes</b>	Porcine reactivity reported in scientific literature (PMID: 16938495). Please note that this antibody is reactive to Mouse and derived from the same host, Mouse. Additional Mouse on Mouse blocking steps may be required for IHC and ICC experiments. Please contact Technical Support for more information.
<b>Specificity/Sensitivity</b>	Detects 1,4-dihydropyridine (DHP) receptor alpha-2 subunit from skeletal and cardiac muscle. Detects a band at 220 kDa under non-reducing and a 143 kDa band under reducing conditions representing DHP from rabbit skeletal muscle membrane preparations. Immunohistochemical staining of DHP in rabbit skeletal muscle with NB120-2864 results in double rows of discrete punctate staining representing pairs of triads on the opposing sides of the Z-lines.
<b>Immunogen</b>	Purified rabbit dihydropyridine receptor.
<b>Product Application Details</b>	
<b>Applications</b>	Western Blot, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, Immunoprecipitation
<b>Recommended Dilutions</b>	Western Blot 1:500, Flow Cytometry 1:100 - 1:200, Immunohistochemistry 1:500, Immunocytochemistry/ Immunofluorescence 1:250, Immunoprecipitation, Immunohistochemistry-Paraffin 1:500, Immunohistochemistry-Frozen 1:500
<b>Application Notes</b>	Use in immunoprecipitation reported in scientific literature (PMID: 8070639).

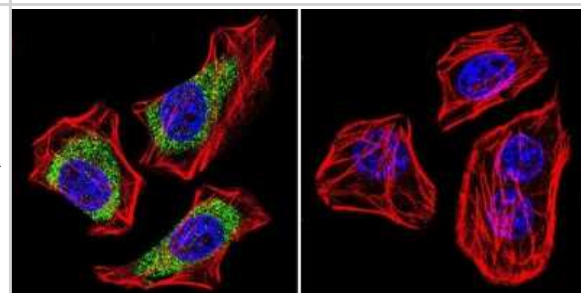


## Images

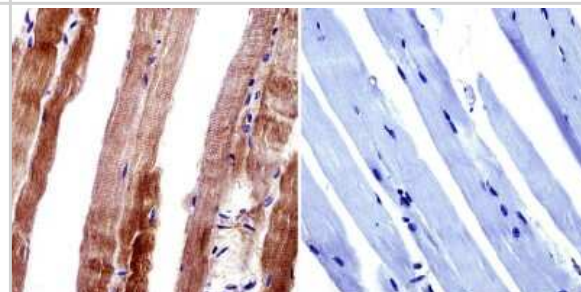
**Western Blot:** CACNA2D1 Antibody (20A) [NB120-2864] - Primary antibody dilution- 1:1000 for 2 Hours at RT, in blocking buffer, 5% Milk in TBS-0.05% Tween : Blocking Overnight at +4 degree C. Secondary antibody : 1:2000 in blocking buffer, 1 hour at RT. Image from verified customer review.



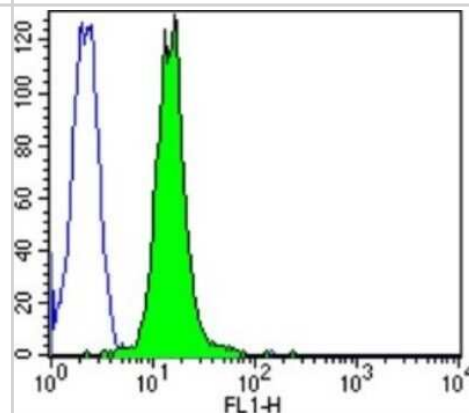
**Immunocytochemistry/Immunofluorescence:** CACNA2D1 Antibody (20A) [NB120-2864] - Cells were grown on chamber slides and fixed with formaldehyde prior to staining. Cells were probed without (control) or with a Dihydropyridine Receptor alpha-2 monoclonal antibody at a dilution of 1:100 overnight at 4 C, washed with PBS and incubated with a DyLight-488 conjugated secondary antibody and nuclei with DAPI (blue) is shown.



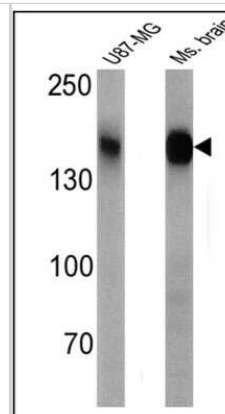
**Immunohistochemistry-Paraffin:** CACNA2D1 Antibody (20A) [NB120-2864] - Normal biopsies of deparaffinized mouse skeletal muscle tissue.



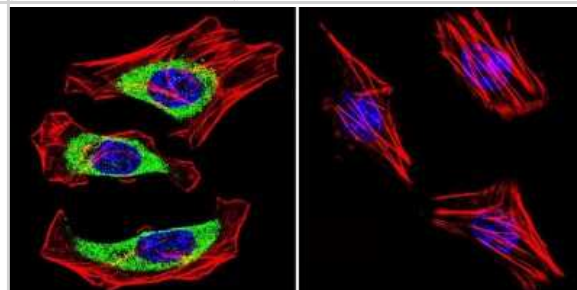
**Flow Cytometry:** CACNA2D1 Antibody (20A) [NB120-2864] - Analysis of C6 cells compared to an isotype control (blue).



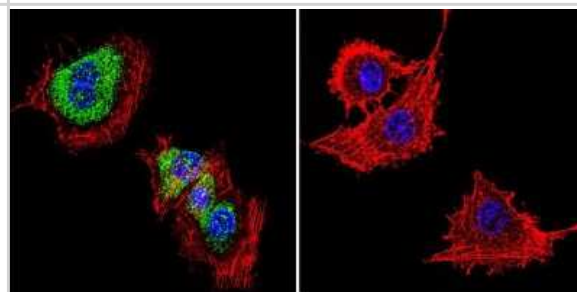
Western Blot: CACNA2D1 Antibody (20A) [NB120-2864] - Analysis of 25 ug of U87-MG (lane 1) and mouse brain (lane 2) cell lysates.



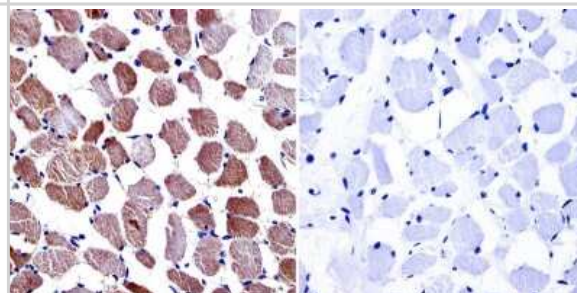
Immunocytochemistry/Immunofluorescence: CACNA2D1 Antibody (20A) [NB120-2864] - Cells were grown on chamber slides and fixed with formaldehyde prior to staining. Cells were probed without (control) or with a Dihydropyridine Receptor alpha-2 monoclonal antibody at a dilution of 1:100 overnight at 4 C, washed with PBS and incubated with a DyLight-488 conjugated secondary antibody and nuclei with DAPI (blue) is shown.



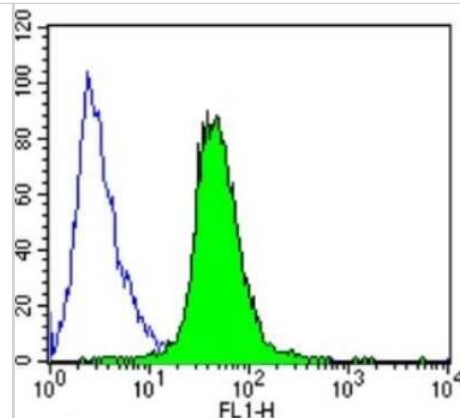
Immunocytochemistry/Immunofluorescence: CACNA2D1 Antibody (20A) [NB120-2864] - Cells were grown on chamber slides and fixed with formaldehyde prior to staining. Cells were probed without (control) or with a Dihydropyridine Receptor alpha-2 monoclonal antibody at a dilution of 1:20 overnight at 4 C, washed with PBS and incubated with a DyLight-488 conjugated secondary antibody and nuclei with DAPI (blue) is shown.



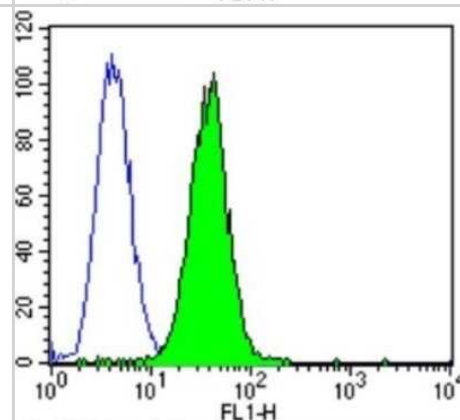
Immunohistochemistry-Paraffin: CACNA2D1 Antibody (20A) [NB120-2864] - Normal biopsies of deparaffinized human skeletal muscle tissue.



Flow Cytometry: CACNA2D1 Antibody (20A) [NB120-2864] - Analysis of SH-SY5Y cells compared to an isotype control (blue).



Flow Cytometry: CACNA2D1 Antibody (20A) [NB120-2864] - Analysis of Neuro-2a cells compared to an isotype control (blue).



## Publications

Liu J, Tao M, Zhao W et al. Calcium channel  $\alpha 2$  delta 1 is essential for pancreatic tumor-initiating cells through sequential phosphorylation of PKM2 Cellular and molecular gastroenterology and hepatology 2022-10-13 [PMID: 36244646] (FLOW, Human)

Yu D, Holm R, Goscinski MA et al. Prognostic and clinicopathological significance of Cacna2d1 expression in epithelial ovarian cancers: a retrospective study. Am J Cancer Res 2016-10-11 [PMID: 27725913]

Yang Y, Yang F, Yang F et al. Gabapentinoid Insensitivity after Repeated Administration is Associated with Down-Regulation of the  $\alpha 2$  delta-1 Subunit in Rats with Central Post-Stroke Pain Hypersensitivity. Neurosci Bull. 2016-02-01 [PMID: 26781878] (ICC/IF, WB, Rat)

Horiuchi-Hirose M, Kashihara T, Nakada T et al. Decrease in the density of t-tubular L-type  $\text{Ca}^{2+}$  channel currents in failing ventricular myocytes. Am J Physiol Heart Circ Physiol. 2010-12-30 [PMID: 21193586] (WB, Mouse)

Tishkoff DX et al. Functional vitamin D receptor (VDR) in the t-tubules of cardiac myocytes: VDR knockout cardiomyocyte contractility. Endocrinology;149(2):558-64. 2008-02-01 [PMID: 17974622] (ICC/IF, Mouse)

Rasmussen HB et al. Subcellular localization of the delayed rectifier  $\text{K}^{+}$  channels KCNQ1 and ERG1 in the rat heart. Am J Physiol Heart Circ Physiol;286(4):H1300-9. 2004-04-01 [PMID: 14670813] (ICC/IF, Rat)

Morton ME et al.  $\alpha 1$  and  $\alpha 2$   $\text{Ca}^{2+}$  channel subunit expression in human neuronal and small cell carcinoma cells. FASEB J;8(11):884-8. 1994-08-01 [PMID: 8070639] (IP, Human)

Flucher BE et al. Localization of the  $\alpha 1$  and  $\alpha 2$  subunits of the dihydropyridine receptor and ankyrin in skeletal muscle triads. Neuron;5(3):339-51. 1990-09-01 [PMID: 2169270] (IF/IHC, Mouse)

Protasi F et al. Role of ryanodine receptors in the assembly of calcium release units in skeletal muscle. J Cell Biol 140:831-42. 1998-01-01 [PMID: 9472035] (IF/IHC, Mouse)



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General: novus@novusbio.com

### **Products Related to NB120-2864**

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HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB720-B	Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin]
NBP1-96778	Mouse IgG2a Isotype Control (M2A)
NBP1-86682PEP	CACNA2D1 Recombinant Protein Antigen

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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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