

CD133 (Prominin-1) Monoclonal Antibody (13A4), eBioscience™

Product Details	
Size	100 µg
Species Reactivity	Dog, Mouse
Published Species	Dog, Human, Mouse
Host/Isotype	Rat / IgG1, kappa
Class	Monoclonal
Type	Antibody
Clone	13A4
Conjugate	Unconjugated
Form	Liquid
Concentration	0.5 mg/mL
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2
Contains	0.09% sodium azide
Storage conditions	4° C
RRID	AB_467471

Applications	Tested Dilution	Publications
Western Blot (WB)	Assay-Dependent	8 Publications
Immunohistochemistry (IHC)	-	23 Publications
Immunohistochemistry (Paraffin) (IHC (P))	-	1 Publication
Immunohistochemistry (PFA fixed) (IHC (PFA))	-	1 Publication
Immunohistochemistry (Frozen) (IHC (F))	Assay-Dependent	5 Publications
Immunocytochemistry (ICC/IF)	-	12 Publications
Flow Cytometry (Flow)	1 µg/test	22 Publications
Immunoprecipitation (IP)	Assay-Dependent	-

Product Specific Information

Description: The 13A4 monoclonal antibody recognizes mouse Prominin-1 (sometimes also referred to as CD133 and, in the case of the human orthologue, as AC133), a 115-120 kDa pentaspan transmembrane (5-TM) domain glycoprotein. Prominin-1 is expressed on primitive cells such as hematopoietic stem and progenitor cells, neural and endothelial stem cells, retina and retinoblastoma, as well as developing epithelium. To date, the function and ligand of Prominin-1 are unknown. The 13A4 antibody does not cross react with rat, human, chicken, or Drosophila antigen but has been reported to work in canine/dog.

Applications Reported: The 13A4 antibody has been reported for use in flow cytometric analysis (~0.25-1 µg/million cells), immunoprecipitation (~10-25 µg/mL), immunoblotting (WB) (~1-5 µg/mL), and immunohistochemical staining (~1-10 µg/mL).

Applications Tested: The 13A4 antibody has been tested by flow cytometric analysis of mouse bone marrow cells. This can be used at less than or equal to 1 µg per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final

volume of 100 μ L. Cell number should be determined empirically but can range from 10^5 to 10^8 cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

Purity: Greater than 90%, as determined by SDS-PAGE.

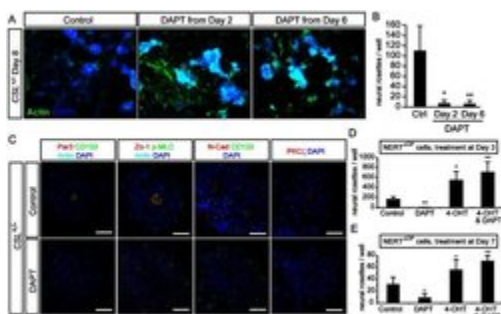
Aggregation: Less than 10%, as determined by HPLC.

Filtration: 0.2 μ m post-manufacturing filtered.

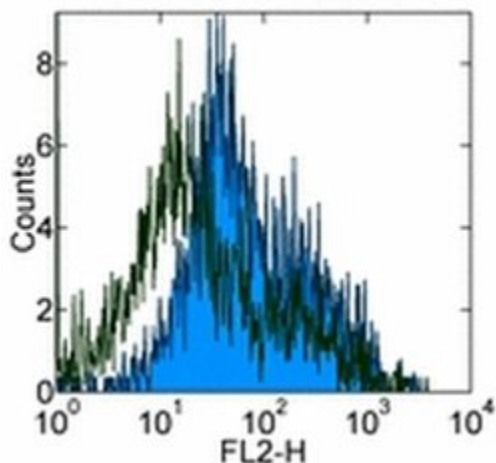
Advanced Verification Data

CD133 (Prominin-1) Antibody (14-1331-82)

Figure 4 Notch is required for rosette maintenance. (A, B) Day8 CSL +/- ES cell neural differentiations, treated with the gamma-secretase inhibitor DAPT from Day 2 or Day 6, display a drastic reduction in rosette number, visualized with staining for actin and DAPI (A), quantified in (B). (C) Acute treatment of CSL +/- cells with DAPT for 16 hours between Day 7 and Day 8 leads to a break-down of existing rosettes, as assessed by Par3 (Pard3)/CD133 (Prominin)/Actin, Zo-1/phosphorylated myosin light chain (P-MLC)/Actin, N-Cadherin (N-Cad)/CD133/Actin, and PKCxi stainings. Remnants of rosettes, cells organized in rings, can be found instead. (D,E) Another ES cell line (NERT DeltaOP), with tamoxifen-inducible Notch1 signalling, confirms that repression of Notch signalling with DAPT reduces rosette numbers, and also reveals that activation of Notch signalling in the presence or absence of DAPT up-regulates the number of rosettes, whether Notch activity is induced on day 3 (D) or day 7 (E). Images in (A) were acquired on a fluorescence microscope at 10x magnification. Scale bars in (C) are 50 μ m. Bar graphs depict means from three experiments performed in triplicate, error bars indicate standard deviation: ***significant difference at $p < 0.001$; **significant difference at $p < 0.01$; *significant difference at $p < 0.05$. For separate channels please see Fig. S6. Cell treatment validation info.



Product Images For CD133 (Prominin-1) Monoclonal Antibody (13A4), eBioscience™



CD133 (Prominin-1) Antibody (14-1331-82) in Flow

Staining of BALB/c bone marrow cells with 0.5 μ g of Rat IgG1 kappa Isotype Control Purified (Product # 14-4301-82) (open histogram) or 0.5 μ g of Anti-Mouse CD133 (Prominin-1) Purified (filled histogram) followed by Anti-Rat IgG Biotin (Product # 13-4813-85) and Streptavidin PE (Product # 12-4317-87). Cells in the myeloid gate were used for analysis.

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Western Blot (8)

Cancer cell international

Musashi-1 promotes cancer stem cell properties of glioblastoma cells via upregulation of YTHDF1.

"14-1331 was used in Western Blotting to identify the direct regulation of YTHDF1 by Musashi-1 which promotes cancer stem cell properties of glioblastoma cells."

Authors: Yarmishyn AA, Yang YP, Lu KH, Chen YC, Chien Y, Chou SJ, Tsai PH, Ma HI, Chien CS, Chen MT, Wang ML

Species
Human

Dilution
Not Cited

Year
2020

The Journal of clinical investigation

Mutant ataxin1 disrupts cerebellar development in spinocerebellar ataxia type 1.

"Published figure using CD133 (Prominin-1) monoclonal antibody (Product # 14-1331-82) in Immunohistochemistry"

Authors: Edamakanti CR, Do J, Didonna A, Martina M, Opal P

Species
Mouse

Dilution
Not Cited

Year
2018

[View more WB references on thermofisher.com](#)

Immunohistochemistry (23)

Nature communications

Heterogeneity and dynamics of active Kras-induced dysplastic lineages from mouse corpus stomach.

"Published figure using CD133 (Prominin-1) monoclonal antibody (Product # 14-1331-82) in Immunohistochemistry"

Authors: Min J, Vega PN, Engevik AC, Williams JA, Yang Q, Patterson LM, Simmons AJ, Bliton RJ, Betts JW, Lau KS, Magness ST, Goldenring JR, Choi E

Species
Not Applicable

Dilution
Not Cited

Year
2019

The Journal of clinical investigation

Mutant ataxin1 disrupts cerebellar development in spinocerebellar ataxia type 1.

"Published figure using CD133 (Prominin-1) monoclonal antibody (Product # 14-1331-82) in Immunohistochemistry"

Authors: Edamakanti CR, Do J, Didonna A, Martina M, Opal P

Species
Mouse

Dilution
Not Cited

Year
2018

[View more IHC references on thermofisher.com](#)

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IHC (P) (1)

IHC (PFA) (1)

IHC (F) (5)

ICC/IF (12)

Flow (22)

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