

Nestin Monoclonal Antibody (10C2), eBioscience™

Product Details	
Size	100 µg
Species Reactivity	Human
Published Species	Rat, Human
Host/Isotype	Mouse / IgG1
Class	Monoclonal
Type	Antibody
Clone	10C2
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_1548837

Applications	Tested Dilution	Publications
Western Blot (WB)	1-5 µg/mL	2 Publications
Immunohistochemistry (IHC)	-	2 Publications
Immunohistochemistry (Paraffin) (IHC (P))	Assay-Dependent	-
Immunohistochemistry (Frozen) (IHC (F))	Assay-Dependent	1 Publication
Immunocytochemistry (ICC/IF)	5 µg/mL	6 Publications
Flow Cytometry (Flow)	Assay-Dependent	1 Publication

Product Specific Information

Description: The monoclonal antibody 10C2 recognizes human nestin (residues 1464-1614). Nestin is a 220-240 kDa Class VI intermediate filament protein that is expressed in stem cells of the developing nervous system. Expression has also been found in pancreatic islet and mesenchymal precursors in addition to cells with angiogenic potential. Upon differentiation, nestin-containing filaments are replaced by cell type-specific intermediate filament proteins, such as GFAP. Expression has been identified in a variety of cancerous cells including glioblastomas and pancreatic tumors. No cross-reactivity to rodent nestins has been observed using the 10C2 antibody.

Applications Reported: This 10C2 antibody has been reported for use in immunocytochemistry, microscopy, western blotting, immunohistochemical staining of frozen tissue sections, immunohistochemical staining of formalin-fixed paraffin embedded tissue sections, and flow cytometric analysis.

Applications Tested: This 10C2 antibody has been tested by western blot on SDS-reduced and non-reduced lysates from U251 cells and can be used at less than or equal to 5 µg/mL. The 10C2 antibody has also been tested by immunocytochemistry on formaldehyde-fixed and permeabilized SKNSH cells and can be used at less than or equal to 5 µg/mL. 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.

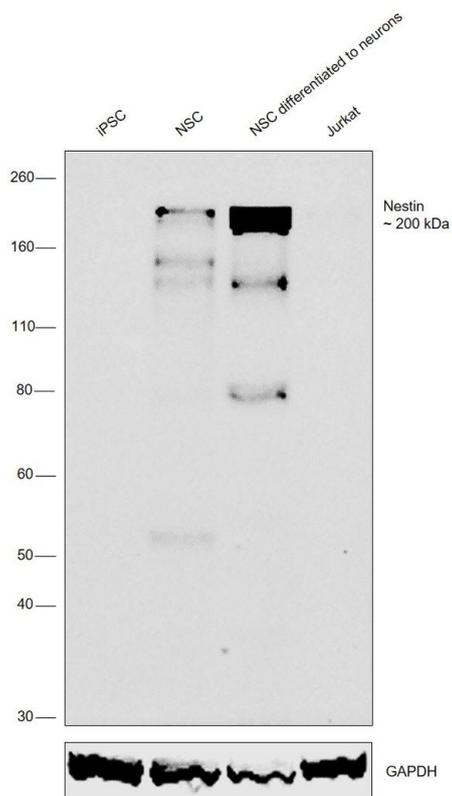
Aggregation: Less than 10%, as determined by HPLC.

Filtration: 0.2 µm post-manufacturing filtered.

Product Images For Nestin Monoclonal Antibody (10C2), eBioscience™

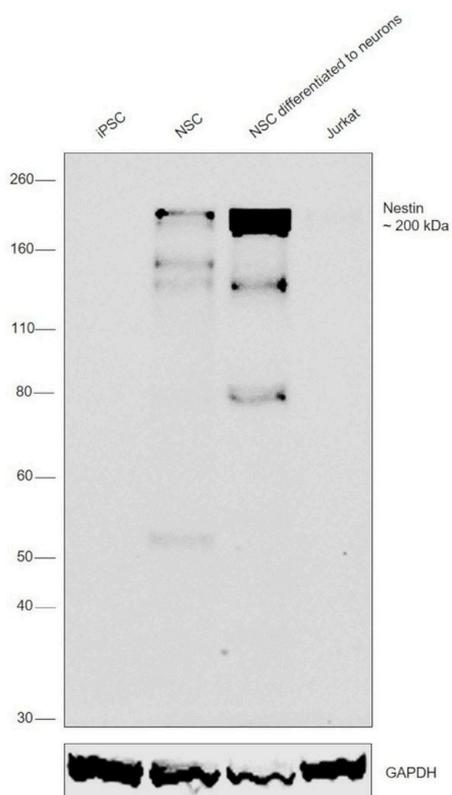
Nestin Antibody (14-9843-82) in WB

Western blot was performed using Anti-Nestin Monoclonal Antibody (10C2), eBioscience™ (Product # 14-9843-82) and a 200 kDa band corresponding to Nestin was observed in NSCs and NSCs differentiated to neurons. Whole cell extracts (30 µg lysate) of iPSC (Lane 1), NSC (Lane 2), NSC differentiated to neurons (Lane 3) and Jurkat (Lane 4) were electrophoresed using NuPAGE™ 4-12% Bis-Tris Protein Gel (Product # NP0321BOX). Resolved proteins were then transferred onto a Nitrocellulose membrane (Product # IB23001) by iBlot® 2 Dry Blotting System (Product # IB21001). The blot was probed with the primary antibody (1 µg/mL) and detected by chemiluminescence with Goat anti-Mouse IgG (H+L) Superclonal™ Recombinant Secondary Antibody, HRP (Product # A28177, 1:4000 dilution) using the iBright FL 1000 (Product # A32752). Chemiluminescent detection was performed using Novex® ECL Chemiluminescent Substrate Reagent Kit (Product # WP20005).



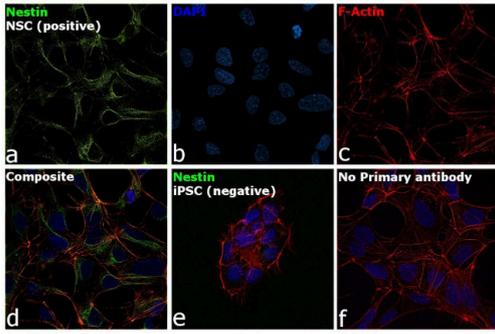
Nestin Antibody (14-9843-82)

Antibody specificity was demonstrated by detection of differential basal expression of the target across cell lines tested owing to their inherent genetic constitution. Relative expression of Nestin was observed in NSCs and NSCs differentiated to neurons in comparison to iPSC and Jurkat using Anti-Nestin Monoclonal Antibody (10C2), eBioscience™ (Product # 14-9843-82) in Western Blot. {RE}



Nestin Antibody (14-9843-82) in ICC/IF

Immunofluorescence analysis of Nestin was performed using 70% confluent log phase NSC cells. The cells were fixed with 4% paraformaldehyde for 10 minutes, permeabilized with 0.1% Triton™ X-100 for 15 minutes, and blocked with 2% BSA for 45 minutes at room temperature. The cells were labeled with Nestin Monoclonal Antibody (10C2), eBioscience™ (Product # 14-9843-82) at 5 µg/mL in 0.1% BSA, incubated at 4 degree celsius overnight and then labeled with Donkey anti-Mouse IgG (H+L) Highly Cross-Adsorbed Secondary Antibody, Alexa Fluor Plus 488 (Product # A32766, 1:2000 dilution), for 45 minutes at room temperature (Panel a: Green). Nuclei (Panel b: Blue) were stained with ProLong™ Diamond Antifade Mountant with DAPI (Product # P36962). F-actin (Panel c: Red) was stained with Rhodamine Phalloidin (Product # R415, 1:300 dilution). Panel d represents the merged image showing cytoplasmic localization. Panel e represents iPSC cells having no expression of Nestin. Panel f represents control cells with no primary antibody to assess background. The images were captured at 60X magnification.



[View more figures on thermofisher.com](https://www.thermofisher.com)

12 References

Western Blot (2)

Biomolecules

Connexin 43 Gene Ablation Does Not Alter Human Pluripotent Stem Cell Germ Lineage Specification.

"Published figure using Nestin monoclonal antibody (Product # 14-9843-82) in Immunocytochemistry"

Authors: Christopher GA, Noort RJ, Esseltine JL

Year
2021

Species
Human

Dilution
1:500

International journal of molecular sciences

Initiation of Pancreatic Cancer: The Interplay of Hyperglycemia and Macrophages Promotes the Acquisition of Malignancy-Associated Properties in Pancreatic Ductal Epithelial Cells.

"14-9843-82 was used in Western Blot to investigate whether concomitant exposure to hyperglycemia and macrophages aggravates epithelial-mesenchymal transition-associated alterations in pancreatic ductal adenocarcinoma."

Authors: Otto L, Rahn S, Daunke T, Walter F, Winter E, Möller JL, Rose-John S, Wesch D, Schäfer H, Sebens S

Year
2021

Species
Human

Dilution
1:500

Immunohistochemistry (2)

PLoS pathogens

Herpes simplex virus type 1 infection leads to neurodevelopmental disorder-associated neuropathological changes.

"Published figure using Nestin monoclonal antibody (Product # 14-9843-82) in Immunohistochemistry"

Authors: Qiao H, Guo M, Shang J, Zhao W, Wang Z, Liu N, Li B, Zhou Y, Wu Y, Chen P

Year
2020

Stem cells translational medicine

Sphere-Derived Multipotent Progenitor Cells Obtained From Human Oral Mucosa Are Enriched in Neural Crest Cells.

"14-9843 was used in Immunohistochemistry-immunofluorescence to isolate neural crest stem cells from oral mucosa using the neurosphere technique and establish in vivo bone tissue regeneration methods."

Authors: Abe S, Yamaguchi S, Sato Y, Harada K

Year
2016

Species
Human

Dilution
1:500

More applications with references on thermofisher.com

IHC (F) (1)

ICC/IF (6)

Flow (1)

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