

Anti-Human Nestin Antibody, Clone 10C2

Antibodies

Mouse monoclonal IgG1 antibody
against human, cynomolgus nestin,
unconjugated

Catalog #60091
#60091.1

100 µg 0.5 mg/mL
25 µg 0.5 mg/mL



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Product Description

The 10C2 antibody reacts with human nestin, a class VI intermediate filament (IF) protein expressed by embryonic neuroepithelial stem cells in the developing nervous system and by pancreatic islet and mesenchymal progenitor cells. Nestin expression is also observed in glioblastomas and many primary and metastatic melanomas and it is a useful angiogenic marker to evaluate neovascularity of endothelial cells in tumors. Nestin is required for the survival and renewal of neural progenitor cells and plays roles in cellular remodeling by forming heterodimers with vimentin or alpha-internexin, a process that appears to be tightly regulated by phosphorylation. Nestin localizes to the growth cones during axon elongation in differentiating neurons and may play a role in growth cone guidance. Nestin expression is down-regulated during differentiation, typically disappearing by embryonic stage E18. The 10C2 antibody reportedly cross-reacts weakly with monkey nestin but not rodent nestin. A doublet band of ~220 - 250 kDa is observed on western blots with this antibody.

Target Antigen Name:	Nestin
Alternative Names:	NES, type VI intermediate filament (IF) protein
Gene ID:	10763
Species Reactivity:	Human, Cynomolgus
Host Species:	Mouse (BALB/c)
Clonality:	Monoclonal
Clone:	10C2
Isotype:	IgG1, kappa
Immunogen:	Recombinant protein comprising amino acids 1464 - 1614 of human nestin fused to glutathione S-transferase
Conjugate:	Unconjugated

Applications

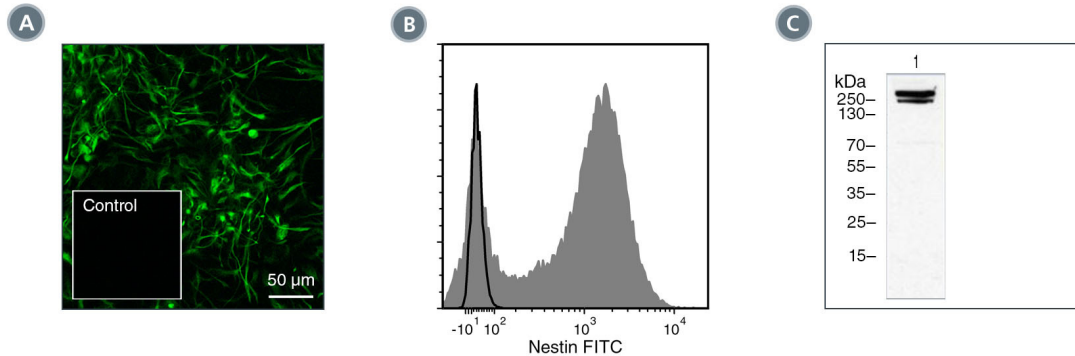
Verified:	FC, ICC, IF, WB
Reported:	FC, ICC, IF, IHC, IP, WB
Special Applications:	This antibody clone has been verified for labeling human neural stem and progenitor cells grown with STEMdiff™ Neural Induction Medium (Catalog #05835), STEMdiff™ Neural Progenitor Medium (Catalog #05833) and NeuroCult™ NS-A Proliferation Kit (Human; Catalog #05751).

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FACS: Fluorescence activated cell sorting; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; RIA: Radioimmunoassay; WB: Western blotting

Properties

Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide
Purification:	The antibody was purified by affinity chromatography.
Stability and Storage:	Product stable at 2 - 8°C when stored undiluted. Do not freeze. For product expiry date, please contact techsupport@stemcell.com.
Directions for Use:	The suggested use of this antibody is: FC, ≤ 0.2 µg per 1 × 10 ⁶ cells in 100 µL volume; ICC/IF, ≤ 0.5 µg/mL; WB, 0.5 - 2 µg/mL. It is recommended that the antibody be titrated for optimal performance for each application.

Data



(A) Human neural progenitor cells (NPCs) were generated from induced pluripotent stem (iPS) cells using STEMdiff™ Neural Induction Medium and cultured on Corning® Matrigel®-coated glass coverslips, then fixed and labeled with Anti-Human Nestin Antibody, Clone 10C2, followed by donkey anti-mouse IgG, Alexa Fluor® 488. Inset shows cells labeled with a mouse IgG1, kappa isotype control antibody followed by donkey anti-mouse IgG, Alexa Fluor® 488.

(B) Flow cytometry analysis of human NPCs generated from iPS cells using STEMdiff™ Neural Induction Medium and cultured on Corning® Matrigel®. NPCs were fixed and labeled with Anti-Human Nestin Antibody, Clone 10C2, followed by Goat Anti-Mouse IgG (H+L) Antibody, Polyclonal, FITC (Catalog #60138FI) (filled histogram), or a mouse IgG1, kappa isotype control antibody, followed by Goat Anti-Mouse IgG (H+L) Antibody, Polyclonal, FITC (solid line histogram).

(C) Western blot analysis of cell lysates from human umbilical vein endothelial cell (HUVEC) with Anti-Human Nestin Antibody, Clone 10C2.

Related Products

For a complete list of antibodies, including other conjugates, sizes and clones, as well as related products available from STEMCELL Technologies, please visit our website at www.stemcell.com/antibodies or contact us at techsupport@stemcell.com.

References

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3. Bignone PA et al. (2013) Identification of human embryonic progenitor cell targeting peptides using phage display. *PLoS One* 8(3): e58200. (ICC, IF)
4. Mak SK et al. (2012) Small molecules greatly improve conversion of human-induced pluripotent stem cells to the neuronal lineage. *Stem Cells Int* 2012: 140427. (ICC, IF)
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10. Messam CA et al. (2000) Coexpression of nestin in neural and glial cells in the developing human CNS defined by a human-specific anti-nestin antibody. *Exp Neurol* 161(2): 585–96. (ICC, IF, WB)

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