Technical Data Sheet

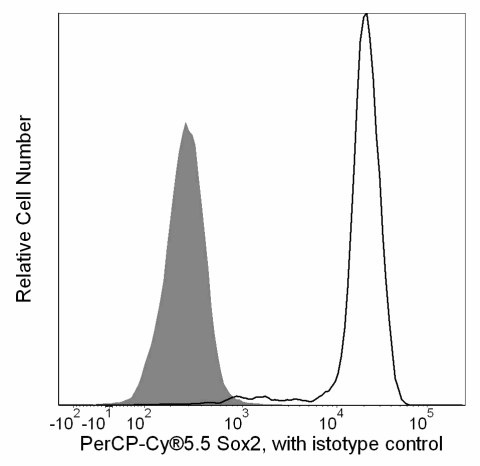
PerCP-Cy™5.5 Mouse anti-Sox2

Product Information

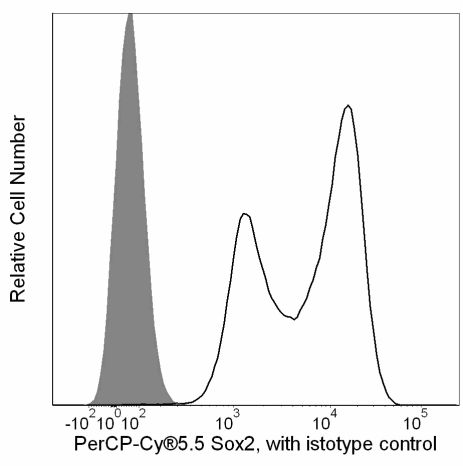
Material Number:	**561506**
Entrez Gene ID:	6657, 20674
Size:	50 tests
Vol. per Test:	5 µl
Clone:	O30-678
Immunogen:	Human Sox2 Recombinant Protein
Isotype:	Mouse (CD) IgG1, κ
Reactivity:	QC Testing: Human Confirmed by western blot using purified antibody (Cat. No. 561469): Mouse
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The monoclonal antibody O30-678 recognizes the Sox2 transcription factor. Sox2 [SRY (sex determining region Y)-box 2] is a member of the SRY-related HMG-box (SOX) family of transcription factors. Sox2 is required for the maintenance of the undifferentiated state of pluripotent stem cells. Complexes of Sox2 with the homeobox transcription factors Oct3/4 and/or Nanog bind to the promoters of a network of genes that are involved in the maintenance of pluripotency and self renewal in stem cells. Sox2 is also a marker of neural stem cells during embryonic development and in the adult brain. The O30-678 antibody recognizes both human and mouse Sox2 proteins.



Analysis of Sox2 on human embryonic stem (ES) cells. *H9 human ES cells (WiCell, Madison, WI) were harvested, fixed in BD Cytofix™ buffer (Cat. No. 554655), permeabilized with BD™ Phosflow Perm/Wash buffer I (Cat. No. 557885) and stained with matching concentrations of a PerCP-Cy®5.5 Mouse IgG1, κ isotype control (shaded histogram cat# 550795) or the PerCP-Cy®5.5 Mouse Anti-Sox2 monoclonal antibody (open histogram). Histograms were derived from gated events based on light scattering characteristics for the H9 cell line. Flow cytometry was performed on a BD LSR™ II flow cytometry system.*



Analysis of Sox2 on human ES cell-derived neural stem cells (NSC). *NSC derived from H9 human ES cells (WiCell, Madison, WI) were harvested, fixed in BD Cytofix™ buffer (Cat. No. 554655), permeabilized with BD™ Phosflow Perm/Wash buffer I (Cat. No. 557885) and stained with matching concentrations of a PerCP-Cy5.5 Mouse IgG1, κ isotype control (shaded histogram, Cat. No. 554680) or the PerCP-Cy5.5 Mouse Anti-Sox2 monoclonal antibody (open histogram). Histograms were derived from gated events based on light scattering characteristics for the H9-derived NSC. Flow cytometry was performed on a BD LSR™ II flow cytometry system.*

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with PerCP-Cy5.5 under optimum conditions, and unconjugated antibody and free PerCP-Cy5.5 were removed. Storage of PerCP-Cy5.5 conjugates in unoptimized diluent is not recommended and may result in loss of signal intensity. Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

Application Notes

Application

Intracellular staining (flow cytometry)	Routinely Tested

BD Biosciences

bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	888.268.5430	32.53.720.550	0120.8555.90	65.6861.0633	0800.771.7157

For country-specific contact information, visit **bdbiosciences.com/how_to_order/**

Suggested Companion Products

Catalog Number	Name	Size	Clone
550795	PerCP-Cy™5.5 Mouse IgG1 κ Isotype Control	0.1 mg	MOPC-21
554655	Fixation Buffer	100 ml	(none)
557885	Perm/Wash Buffer I	125 ml	(none)
554656	Stain Buffer (FBS)	500 ml	(none)

Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1 × 10^6 cells in a 100-µl experimental sample (a test).
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. PerCP-Cy5.5 is optimized for use with a single argon ion laser emitting 488-nm light. Because of the broad absorption spectrum of the tandem fluorochrome, extra care must be taken when using dual-laser cytometers, which may directly excite both PerCP and Cy5.5™. We recommend the use of cross-beam compensation during data acquisition or software compensation during data analysis.
4. Please observe the following precautions: Absorption of visible light can significantly alter the energy transfer occurring in any tandem fluorochrome conjugate; therefore, we recommend that special precautions be taken (such as wrapping vials, tubes, or racks in aluminum foil) to prevent exposure of conjugated reagents, including cells stained with those reagents, to room illumination.
5. PerCP-Cy5.5–labelled antibodies can be used with FITC- and R-PE–labelled reagents in single-laser flow cytometers with no significant spectral overlap of PerCP-Cy5.5, FITC, and R-PE fluorescence.
6. An isotype control should be used at the same concentration as the antibody of interest.
7. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
8. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
9. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
10. Cy is a trademark of Amersham Biosciences Limited. This conjugated product is sold under license to the following patents: US Patent Nos. 5,486,616; 5,569,587; 5,569,766; 5,627,027.
11. This product is subject to proprietary rights of Amersham Biosciences Corp. and Carnegie Mellon University and made and sold under license from Amersham Biosciences Corp. This product is licensed for sale only for research. It is not licensed for any other use. If you require a commercial license to use this product and do not have one return this material, unopened to BD Biosciences, 10975 Torreyana Rd, San Diego, CA 92121 and any money paid for the material will be refunded.

References

Boyer LA, Lee TI, Cole MF, et al. Core transcriptional regulatory circuitry in human embryonic stem cells. *Cell.* 2005; 122:947-956. (Biology)

Pan G, Thomson JA. Nanog and transcriptional networks in embryonic stem cell pluripotency. *Cell Res.* 2007; 17:42-49. (Biology)

Takahashi K, Yamanaka S. Induction of pluripotent stem cells from mouse embryonic and adult fibroblast cultures by defined factors. *Cell.* 2006; 126:633-676. (Biology)