Technical Data Sheet

V450 Mouse anti-Sox2

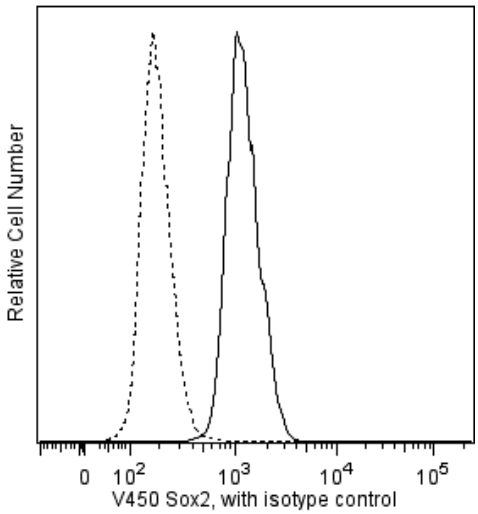
Product Information

Material Number:	**561610**
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 protein stabilizer and ≤0.09% sodium azide.

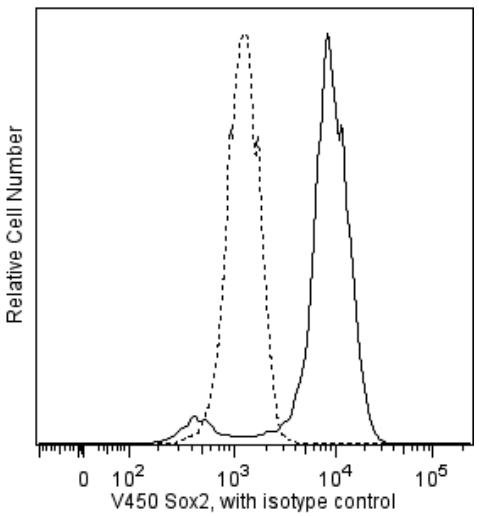
Description

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.

The antibody is conjugated to BD Horizon™ V450, which has been developed for use in multicolor flow cytometry experiments and is available exclusively from BD Biosciences. It is excited by the **V**iolet laser Ex max of 406 nm and has an Em Max at **450** nm. Conjugates with BD Horizon™ V450 can be used in place of Pacific Blue™ conjugates.



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 BD™ Horizon V450 Mouse IgG1, κ isotype control (dashed line, Cat. No. 560373) or BD™ Horizon V450 Mouse Anti-Sox2 monoclonal antibody (solid line). 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. BD Phosflow™ Perm Buffer III can also be used with this antibody conjugate.*



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 BD™ Horizon V450 Mouse IgG1, κ isotype control (dashed line, Cat. No. 560373) or BD™ Horizon V450 Mouse Anti-Sox2 monoclonal antibody (solid line). 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. BD Phosflow™ Perm Buffer III can also be used with this antibody conjugate.*

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Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
The antibody was conjugated with BD Horizon™ V450 under optimum conditions, and unreacted BD Horizon™ V450 was removed.
Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

Application Notes

Application

Intracellular staining (flow cytometry)	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
554655	Fixation Buffer	100 ml	(none)
557885	Perm/Wash Buffer I	125 ml	(none)
560373	V450 Mouse IgG1, κ Isotype Control	0.1 mg	MOPC-21
554656	Stain Buffer (FBS)	500 ml	(none)
558050	Perm Buffer III	125 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. An isotype control should be used at the same concentration as the antibody of interest.
4. BD Horizon™ V450 has a maximum absorption of 406 nm and maximum emission of 450 nm. Before staining with this reagent, please confirm that your flow cytometer is capable of exciting the fluorochrome and discriminating the resulting fluorescence.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
6. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
7. 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.

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)