Technical Data Sheet

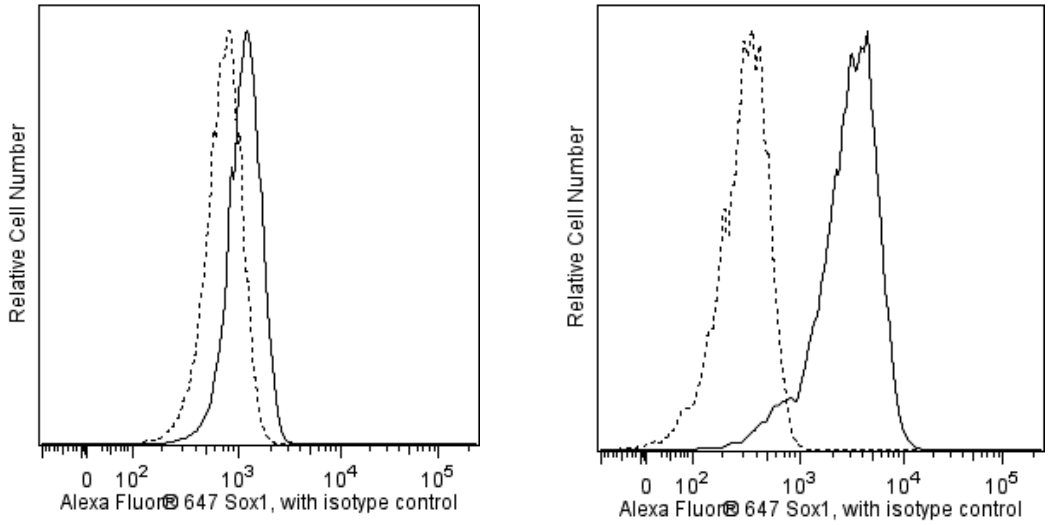
Alexa Fluor® 647 Mouse Anti-Human Sox1

Product Information

Material Number:	**562224**
Alternate Name:	Transcription factor SOX-1; SRY (sex determining region Y)-box 1
Size:	50 tests
Vol. per Test:	5 µl
Clone:	N23-844
Immunogen:	Human Sox1 Peptide
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing BSA, protein stabilizer, and ≤0.09% sodium azide.

Description

The N23-844 monoclonal antibody reacts with human Sox1, a member of the SOX [SRY (sex determining region Y)-HMG-box] family of transcription factors. The encoded protein may act as a transcriptional activator after forming a protein complex with other proteins. It is one of the earliest transcription factors to be expressed in ectodermal cells committed to the neural fate. Sox1 is expressed in both embryonic and somatic neural stem and progenitor cells, and it is down regulated during neuronal differentiation in many neuronal subtypes.



Analysis of Sox1 in H9 Embryonic Stem (ES) cells (left panel) and H9-derived Neural Stem Cells (NSC) (right panel). *H9 human ES cells (WiCell, Madison, WI) and H9-derived NSC were harvested with BD™ Accutase™ Cell Detachment Solution (Cat. No. 561527), fixed in BD Cytofix™ Fixation Buffer (Cat. No. 554655), and permeabilized with BD Phosflow™ Perm Buffer III (Cat. No.558050). Cells were stained with matching concentrations of either Alexa Fluor® 647 Mouse Anti-Human Sox1 antibody (solid lines) or Alexa Fluor® 647 Mouse IgG1, κ isotype control (dashed lines, Cat. No.557783). Histograms were derived from gated events based on light scattering characteristics for the ES and NSC respectively. Flow cytometry was performed on a BD™ LSR II flow cytometry system.*

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

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

The antibody was conjugated to Alexa Fluor® 647 under optimum conditions, and unreacted Alexa Fluor® 647 was removed.

Application Notes

Application

Intracellular staining (flow cytometry)	Routinely Tested

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Suggested Companion Products

Catalog Number	Name	Size	Clone
558050	Perm Buffer III	125 ml	(none)
557783	Alexa Fluor® 647 Mouse IgG1 κ Isotype control	50 tests	MOPC-21
554655	Fixation Buffer	100 ml	(none)
561527	Accutase™ Cell Detachment Solution	100 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. The Alexa Fluor®, Pacific Blue™, and Cascade Blue® dye antibody conjugates in this product are sold under license from Molecular Probes, Inc. for research use only, excluding use in combination with microarrays, or as analyte specific reagents. The Alexa Fluor® dyes (except for Alexa Fluor® 430), Pacific Blue™ dye, and Cascade Blue® dye are covered by pending and issued patents.
3. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
4. Alexa Fluor® 647 fluorochrome emission is collected at the same instrument settings as for allophycocyanin (APC).
5. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
6. 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.
7. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
8. An isotype control should be used at the same concentration as the antibody of interest.
9. mTESR™1 is a trademark of StemCell Technologies.
10. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Kan L, Israsena N, Zhang Z, et al. Sox1 acts through multiple independent pathways to promote neurogenesis. *Dev Biol.* 2004; 15;26(2):580-594. (Biology)

Malas S, Duthie SM, Mohri F, Lovell-Badge R, Episkopou V. Cloning and mapping of the human SOX1: a highly conserved gene expressed in the developing brain. *Mamm Genome.* 1997; 8(11):866-868. (Biology)

Pevny LH, Sockanathan S, Placzek M, Lovell-Badge R. A role for SOX1 in neural determination. *Development.* 1998; 125(10):1967-1978. (Biology)

Wilson M, Koopman P. Matching SOX: partner proteins and co-factors of the SOX family of transcriptional regulators. *Curr Opin Genet Dev.* 2002; 12(4):441-446. (Biology)

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