Technical Data Sheet

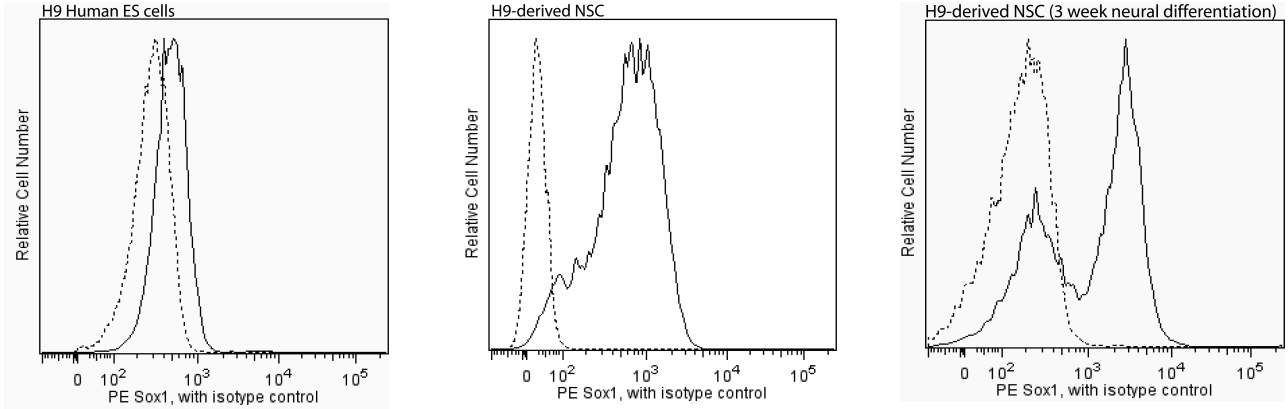
PE Mouse anti-Human Sox1

Product Information

Material Number:	**561592**
Size:	50 tests
Vol. per Test:	5 µl
Clone:	N23-844
Immunogen:	Human Sox1 Peptide
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testted: Human
Storage Buffer:	Aqueous buffered solution containing BSA 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), H9-derived Neural Stem Cells (NSC) (middle panel), and H9-derived Neurons (right panel). *H9 human ES cells (WiCell, Madison, WI), H9-derived NSC, and H9-derived neurons were harvested, fixed in BD Cytofix™ buffer (Cat. No. 554655), and permeabilized with BD™ Phosflow Perm buffer III (Cat. No. 558050). All cells were then blocked with 10% mouse serum (Sigma M9505) and stained with matching concentrations of either PE Mouse IgG1, κ isotype control (dashed histograms, Cat. No. 554680) or PE Mouse Anti-Human Sox1 monoclonal antibody (solid lines). Histograms were derived from gated events based on light scattering characteristics of the ES, NSC, and neurons, respectively. Flow cytometry was performed on a BD LSR™ II flow cytometry system. In the right panel, the brighter peak consists of undifferentiated NSC and glial cells that are staining positive for Sox1 and the dimmer peak consists of the neuronal population.*

Preparation and Storage

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

The antibody was conjugated with R-PE under optimum conditions, and unconjugated antibody and free PE were 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)
558050	Perm Buffer III	125 ml	(none)
554656	Stain Buffer (FBS)	500 ml	(none)
554680	PE Mouse IgG1, κ Isotype Control	0.1 mg	MOPC-21

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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. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
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.

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)