

Reagents Provided

NorthernLights™ 557 (NL557)-conjugated mouse monoclonal anti-human/mouse SOX2: Supplied as a 10X solution of antibody in 0.5 mL PBS containing 0.1% sodium azide.

Clone #: 245610

Isotype: mouse IgG_{2A}

Storage

Reagents are stable for **twelve months** from date of receipt when stored in the dark at 2° - 8° C.

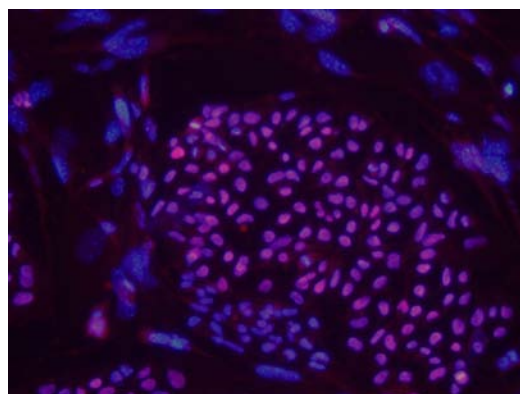
Intended Use

Designed to visualize the expression of SOX2 by fluorescence microscopy.

Product Description

This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a mouse immunized with purified *E. coli*-derived, recombinant SOX2 (rhSOX2; aa 135 - 317). The IgG fraction of the tissue culture supernatant was purified by Protein G affinity chromatography. The purified antibody was then conjugated to fluorochrome NL557. The spectral characteristics of NL557 are provided, along with those of Rhodamine Red™-X (RRX) and Cy™3 for comparison.

Fluorochrome	Absorption Maximum (nm)	Emission Maximum (nm)
NL557	557	574
RRX	570	590
Cy3	548	562



SOX2-NL557

BG01v cells were stained with NL557-conjugated anti-human SOX2 (Catalog # NL2018R, red) and counterstained with DAPI (blue).

FOR RESEARCH USE ONLY. NOT FOR USE IN HUMANS.

Background Information

SOX2 is a member of the SOX (SRY-like HMG-box gene) transcription factor family involved in the regulation of embryonic development and in the determination of cell fate.¹ SOX2 is predominantly expressed in immature and undifferentiated cells of the neural epithelium of the entire central nervous system.^{2,3} SOX2 plays a key role in determining the first three lineages present at implantation, and in regulating cell proliferation and differentiation in the developing peripheral nervous system.⁴⁻⁷

References

1. Pevny, L.H. and R. Lovell-Badge (1997) *Curr. Opin. Genet. Dev.* **7**:338.
2. Collignon, J. *et al.* (1996) *Development* **122**:509.
3. Uwanogho, D. *et al.* (1995) *Mech. Dev.* **49**:23.
4. Graham, V. *et al.* (2003) *Neuron* **39**:749.
5. Avilion, A.A. *et al.* (2003) *Genes Dev.* **17**:126.
6. Kishi, M. *et al.* (2000) *Development* **127**:791.
7. Yuan, H. *et al.* (1995) *Genes Dev.* **9**:2635.

Immunocytochemistry Validation

This antibody has been tested for immunocytochemistry using BG01v cells. Cells were fixed in PBS containing 4% paraformaldehyde, and blocked with PBS containing 10% normal donkey serum, 0.1% Triton® X-100, and 1% BSA. After blocking, cells were incubated with NL55-conjugated antibody at a final concentration of 1X (1:10 dilution) in blocking buffer for 3 hours at room temperature, or overnight at 4° C, in the dark. Between each step, cells were washed with PBS containing BSA. If a staining volume of 250 µL is used, this kit can be used for 20 tests; 100 tests can be done in a staining volume of 50 µL.

Warning: Contains sodium azide as a preservative - sodium azide may react with lead and copper plumbing to form explosive metal azides. Flush with large volumes of water during disposal.