

## Reagents Provided

**NorthernLights™ 637 (NL637)-conjugated goat polyclonal anti-human/mouse SOX2:** Supplied as a 10X solution of antibody in 0.5 mL PBS containing 0.1% sodium azide.

**Isotype:** goat IgG

## Storage

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

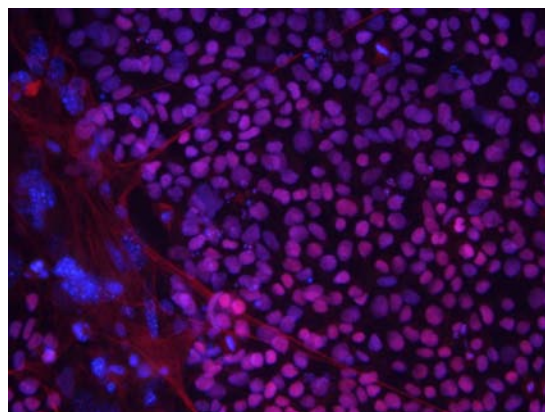
## Intended Use

Designed to visualize the expression of SOX2 by fluorescence microscopy.

## Product Description

Produced in goats immunized with purified, *E. coli*-derived, recombinant human SRY (sex determining region Y) box 2 (rhSOX2; aa 135 - 317). Human SOX2 specific IgG was purified by human SOX2 affinity chromatography. The purified antibody was then conjugated to fluorochrome NL637. The spectral characteristics of NL637 are provided, along with those of allophycocyanin (APC), Alexa Fluor® 647, and Indodicarbocyanine (Cy™5) for comparison.

Fluorochrome	Absorption Maximum (nm)	Emission Maximum (nm)
NL637	637	658
APC	645	660
Alexa Fluor 647	650	668
Cy5	650	670



**SOX2-NL637**

BG01v cells were stained with NL637-conjugated anti-human/mouse SOX2 (Catalog # NL20181V, red) and counterstained with DAPI (blue).

## 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.<sup>1</sup> SOX2 is predominantly expressed in immature and undifferentiated cells of the neural epithelium in the central nervous system.<sup>2,3</sup> 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.<sup>4-7</sup>

## References

1. Pevny, L.H. & 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 NL637-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 with 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.

FOR RESEARCH USE ONLY. NOT FOR USE IN HUMANS.

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