

DESCRIPTION	
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human SOX6 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human (rh) SOX5 or rhSOX13 is observed.
<b>Source</b>	Monoclonal Mouse IgG <sub>2A</sub> Clone # 667136
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human SOX6 Met1-Leu339 Accession # P35712
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

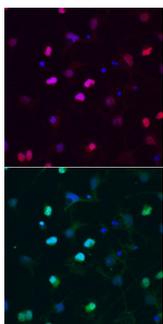
**APPLICATIONS**

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

	Recommended Concentration	Sample
<b>Immunocytochemistry</b>	8-25 µg/mL	See Below

**DATA**

**Immunocytochemistry**



**SOX6 in Rat Cortical Stem Cells.** SOX6 was detected in immersion fixed 7-day differentiated rat cortical stem cells using Mouse Anti-Human SOX6 Monoclonal Antibody (Catalog # MAB7759) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red, upper panel; Catalog # NL007). Olig2 was also detected in these cells using Goat Anti-Human Olig2 Affinity-purified Polyclonal Antibody (Catalog # AF2418). Cells were double-stained using the NorthernLights™ 493-conjugated Anti-Goat IgG Secondary Antibody (green, lower panel; Catalog # NL003) and counterstained with DAPI (blue). Specific staining was localized to nuclei of early oligodendrocytes and astrocytes. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.5 mg/mL.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**BACKGROUND**

SOX6 is a 92 kDa member of the Sox [Sry-related high mobility group (HMG) box] DNA binding protein family, and initially was isolated from an adult testis cDNA library. Human SOX6 is 828 amino acids (aa) in length. Aa 184-262 constitute a coiled-coil region. Aa 219-261, 280-285, and 313-317 make up a Glu-rich and two poly-Ala regions, respectively. Also, there are two additional isoforms for SOX6. Isoform 2 is formed by the deletion of aa 327-367 found in isoform 1, and isoform 3 is formed by the deletion of aa 579-598 found in isoform 1. Finally, aa 620-683 make up the SOX-TCF-HMG-box region. Human SOX6 shares 97% aa identity with mouse SOX6. Previous studies have suggested that SOX6 plays a role in the development of the central nervous system (CNS) and chondrogenesis. Another study, however, revealed that the mutant pIOOH allele, which is located on the same chromosome as SOX6, develops myopathy and an atrioventricular (AV) heart block, a cardiac conduction defect that is a main cause of death in human cardiac myopathies. Electronmicroscopic evaluation of the mutant cardiac and skeletal muscle demonstrated significant change in ultrastructure. Thus, the phenotype of the pIOOH mutation suggests that the SOX6 protein also may be involved in maintaining normal physiological functions of muscle tissue, including the heart. In addition genome-wide association studies have found that the SOX6 gene plays an important role in the coregulation of obesity and osteoporosis. Moreover, SOX6 has been shown to be a transcriptional factor that is specifically expressed in the developing nervous system and in the early stages of chondrogenesis in mouse embryos, and it has been revealed that SOX6 was expressed in glioma tissues, but not in normal adult brain tissue.