Human SOX6 Alexa Fluor® 488-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 667162

Catalog Number: FAB77591G

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human SOX6 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human (rh) SOX5 or rhSOX13 is observed.
Source	Monoclonal Mouse IgG_1 Clone # 667162
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human SOX6 Met1-Leu339 Accession # P35712
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.*

Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

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.

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