

DESCRIPTION

Species Reactivity	Human
Specificity	Detects a synthetic peptide specific for human SOX14 around amino acid 190 in Direct ELISA.
Source	Monoclonal Mouse IgG _{2A} Clone # 1100814
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Synthetic Peptide Accession # O95416
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and 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.
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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

SOX14 is a 36 kDa protein that belongs to the SOX (SRY-related HMG-box) family of transcription factors. It plays a crucial role in the development and differentiation of the central nervous system and is critically involved in the regulation of embryogenesis, neural differentiation, and the development of specific neuronal populations. Aberrant expression or mutations of SOX14 have been associated with developmental disorders, including speech and cognitive impairments, as well as various cancers such as medulloblastoma and glioblastoma where it impacts cell proliferation, migration, and survival pathways. SOX14 is also essential for proper neural crest cell development and is implicated in neural tube defects when dysregulated. This makes it an important biomarker for neurological development and related pathologies.

References:

1. Yao L, Zhang J, Xing B, Chen F, Zhang G, Teng Q, Jin J. SOX14 promotes glioma cell proliferation and invasion by suppressing p53 signaling. *Oncotarget*. 2018 Jun 12;9(45):27646-27657. doi: 10.18632/oncotarget.25542. PMID: 29983854; PMCID: PMC6029639.
2. Smit R, Louw S, Stevens J, Kay V. SOX14 is critical for neural crest cell differentiation and neural tube closure in murine embryonic development. *J Neurosci Res*. 2021 May;99(5):1131-1140. doi: 10.1002/jnr.24759. PMID: 33577345; PMCID: PMC8489940.

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