

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 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 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.

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.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.