Human WIZ Alexa Fluor® 594-conjugated Antibody

Monoclonal Mouse IgG Clone # 1110627
Catalog Number: FAB11743T
100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects a synthetic peptide specific for human WIZ around amino acid 1100 in Direct ELISA.
Source	Monoclonal Mouse IgG Clone # 1110627
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Synthetic Peptide Accession # O95785
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.*

Immunocytochemistry	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

Widely interspaced zinc finger motifs (WIZ) is an epigenetic regulatory protein with a molecular weight of approximately 95 kDa. This protein plays a critical role in chromatin remodeling and transcriptional regulation by interacting with key epigenetic modifiers such as G9a/GLP and other chromatin-associated complexes. WIZ is ubiquitously expressed across various tissues and is essential for maintaining proper gene expression patterns during development and differentiation. It has been implicated in processes such as neuronal development, where it facilitates neuron-specific gene activation and repression, and in safeguarding chromatin architecture. Dysregulation of WIZ expression or function contributes to pathological conditions, including various neuropsychiatric disorders and cancer, where its role in epigenetic silencing can influence tumorigenesis and disease progression. Mutations in the WIZ gene are associated with cognitive impairments and developmental delay syndromes, suggesting its importance in neuroplasticity and brain development. As a key mediator of chromatin dynamics, WIZ serves as a promising target for research into epigenetic therapies and biomarkers of disease.

References:

1. Mozzetta C, Pontis J, Ait-Si-Ali S. Functional Crosstalk Between Lysine Methyltransferases on Histone Substrates: The Case of G9A/GLP and Polycomb Repressive Complex 2. Antioxid Redox Signal. 2015 Jun 1;22(16):1365-81. doi: 10.1089/ars.2014.6116. Epub 2014 Dec 19. PMID: 25365549; PMCID: PMC4432786.
2. Justice M, Carico ZM, Stefan HC, Dowen JM. A WIZ/Cohesin/CTCF Complex Anchors DNA Loops to Define Gene Expression and Cell Identity. Cell Rep. 2020 Apr 14;31(2):107503. doi: 10.1016/j.celrep.2020.03.067. PMID: 32294452; PMCID: PMC7212317.
3. Simon JM, Parker JS, Liu F, Rothbart SB, Ait-Si-Ali S, Strahl BD, Jin J, Davis IJ, Mosley AL, Pattenden SG. A Role for Widely Interspaced Zinc Finger (WIZ) in Retention of the G9a Methyltransferase on Chromatin. J Biol Chem. 2015 Oct 23;290(43):26088-102. doi: 10.1074/jbc.M115.654459. Epub 2015 Sep 3. PMID: 26338712; PMCID: PMC4646261.

PRODUCT SPECIFIC NOTICES

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