

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
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose.

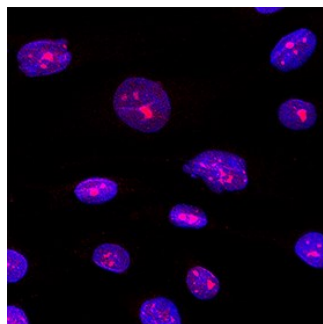
APPLICATIONS

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
Immunocytochemistry	3-25 µg/mL	Immersion fixed MG-63 human osteosarcoma cell line

DATA

Immunocytochemistry



Detection of WIZ in MG-63 Human Cell Line. WIZ was detected in immersion fixed MG-63 human osteosarcoma cell line using Mouse Anti-Human WIZ Monoclonal Antibody (Catalog # MAB11743) at 8 µg/ml for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to the nucleus. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute lyophilized material at 0.2 mg/ml in sterile PBS. For liquid material, refer to CoA for concentration.
Shipping	Lyophilized product is shipped at ambient temperature. Liquid small pack size (-SP) is shipped with polar packs. Upon receipt, store immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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, Downen 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.