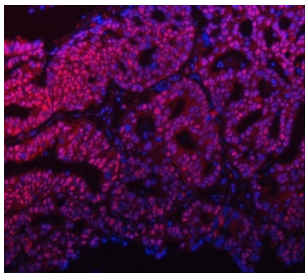
mSin3A Antibody / SIN3A Polyclonal Antibody (RQ7675)

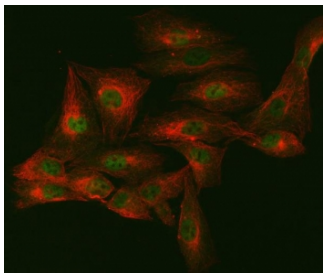
Catalog No.	Formulation	Size
RQ7675	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

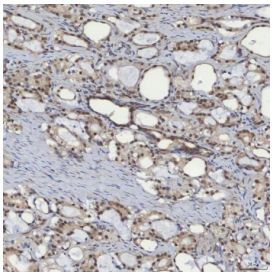
Species Reactivity	Human, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q96ST3
Localization	Nuclear
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Flow cytometry: 1-3ug/million cells Immunofluorescence: 5ug/ml Direct ELISA: 0.1-0.5ug/ml
Limitations	This mSin3A Antibody / SIN3A Polyclonal Antibody is available for research use only.



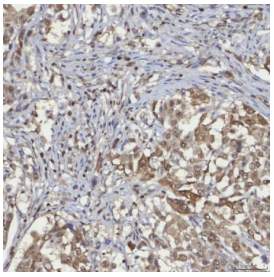
mSin3A Antibody IF Staining of Human Ovarian Cancer Tissue. Immunofluorescence analysis of FFPE human ovarian cancer tissue using SIN3A Polyclonal Antibody (red), with DAPI nuclear counterstaining (blue). Prominent red immunofluorescence is observed throughout the tissue, including nuclear-associated regions, with heterogeneous signal intensity. Heat-induced epitope retrieval was performed using pH 8 EDTA buffer for 20 minutes.



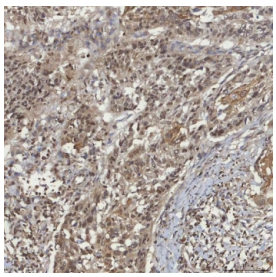
mSin3A Antibody IF Staining of Human U-2 OS Cells. Immunofluorescence analysis of FFPE human U-2 OS cells using SIN3A Polyclonal Antibody (green), with alpha-tubulin monoclonal antibody counterstaining (red). SIN3A-associated green fluorescence is concentrated primarily in nuclear regions, while red staining highlights the microtubule network. Heat-induced epitope retrieval was performed using pH 6 citrate buffer for 20 minutes.



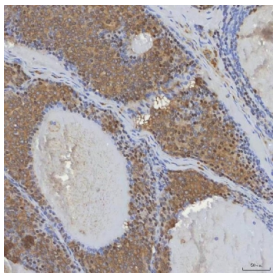
mSin3A Antibody IHC Staining of Human Prostate Adenocarcinoma Tissue. Immunohistochemical analysis of FFPE human prostate adenocarcinoma tissue using SIN3A Polyclonal Antibody. Heterogeneous brown DAB immunoreactivity is observed within glandular tumor structures, including nuclear-associated and diffuse cellular staining. Heat-induced epitope retrieval was performed using pH 8 EDTA buffer for 20 minutes.



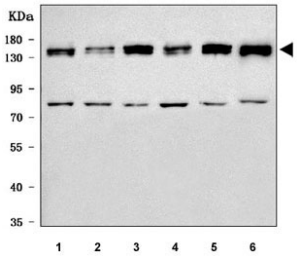
mSin3A Antibody IHC Staining of Human Lung Adenocarcinoma Tissue. Immunohistochemical analysis of FFPE human lung adenocarcinoma tissue using SIN3A Polyclonal Antibody. Brown DAB immunoreactivity is observed in tumor cell populations, with heterogeneous staining intensity and areas of more prominent cellular labeling. Heat-induced epitope retrieval was performed using pH 8 EDTA buffer for 20 minutes.



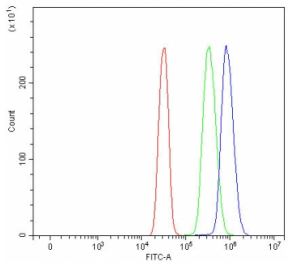
mSin3A Antibody IHC Staining of Human Larynx Squamous Cell Carcinoma Tissue. Immunohistochemical analysis of FFPE human larynx squamous cell carcinoma tissue using SIN3A Polyclonal Antibody. Widespread brown DAB immunoreactivity is observed among tumor cells, with variable staining intensity across the section. Heat-induced epitope retrieval was performed using pH 8 EDTA buffer for 20 minutes.



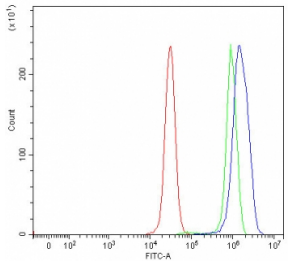
mSin3A Antibody IHC Staining of Human Breast Cancer Tissue. Immunohistochemical analysis of FFPE human breast cancer tissue using SIN3A Polyclonal Antibody. Prominent brown DAB immunoreactivity is observed throughout much of the tumor tissue, with heterogeneous staining intensity and areas of weaker labeling. Heat-induced epitope retrieval was performed using pH 8 EDTA buffer for 20 minutes.



mSin3A Antibody WB Analysis of Human and Rat Cell Lysates. Western blot analysis of human HeLa (lane 1), Jurkat (lane 2), 293T (lane 3), K562 (lane 4), MCF-7 (lane 5), and rat PC-12 (lane 6) cell lysates using SIN3A Polyclonal Antibody. A prominent immunoreactive band is detected at approximately 140-145 kDa in all six samples, consistent with the predicted SIN3A molecular weight of approximately 145 kDa. An additional band near 75-80 kDa is also observed; its identity has not been established.



mSin3A Antibody FACS Staining of Human SiHa Cells. Flow cytometry analysis of human SiHa cells using SIN3A Polyclonal Antibody at 1 ug per million cells following blocking with goat serum. The red histogram represents cells alone, the green histogram represents the isotype control, and the blue histogram represents antibody staining. A clear rightward fluorescence shift relative to the isotype control is observed under the tested conditions.



mSin3A Antibody FACS Staining of Human 293T Cells. Flow cytometry analysis of human 293T cells using SIN3A Polyclonal Antibody at 1 ug per million cells following blocking with goat serum. The red histogram represents cells alone, the green histogram represents the isotype control, and the blue histogram represents antibody staining. A pronounced rightward fluorescence shift is observed in the antibody-stained population compared with the isotype control.

Description

mSin3A Antibody / SIN3A Polyclonal Antibody recognizes SIN3A, a transcriptional corepressor that regulates gene expression through the recruitment and organization of chromatin-modifying protein complexes. Also known as mammalian Sin3A, this nuclear protein serves as a scaffold for multiprotein assemblies containing histone deacetylases, transcriptional regulators, and other chromatin-associated factors. Rather than binding DNA directly through a sequence-specific recognition domain, SIN3A is recruited to target genes through interactions with transcription factors and associated regulatory proteins. These interactions allow SIN3A-containing complexes to influence chromatin structure and transcriptional activity.

SIN3A contains four paired amphipathic helix (PAH) domains that mediate interactions with transcriptional regulators, including members of the MAD family. Through these interactions, SIN3A participates in transcriptional repression associated with the MAD-MAX network, which counteracts selected MYC-dependent transcriptional programs. SIN3A also interacts with histone deacetylases HDAC1 and HDAC2, facilitating the removal of acetyl groups from histone tails. Histone deacetylation can promote a chromatin environment less permissive to transcription, although the effects of SIN3A complexes depend on their composition and genomic context.

Beyond transcriptional repression, SIN3A contributes to cell cycle regulation, differentiation, development, and the maintenance of cellular identity. Its interactions with diverse transcription factors enable coordinated regulation of genes involved in proliferation, metabolism, and stress responses. SIN3A-associated complexes also participate in pathways related to DNA damage responses and genome stability. Disruption of SIN3A function can alter transcriptional programs and cellular behavior, making the protein relevant to studies of developmental disorders and cancer biology.

SIN3A is predominantly localized to the nucleus, consistent with its central role in chromatin-associated transcriptional regulation. Its biological effects are determined by interactions with multiple regulatory proteins rather than by intrinsic enzymatic activity. mSin3A Antibody supports investigations of SIN3A protein expression and distribution, helping researchers examine the relationship between transcriptional corepressor complexes, chromatin regulation, and cellular differentiation.

Explore additional Cell Biology Antibodies for investigating transcriptional regulation, chromatin organization, and cellular differentiation.

Application Notes

Optimal dilution of the mSin3A Antibody / SIN3A Polyclonal Antibody should be determined by the researcher.

Immunogen

E. coli-derived recombinant human protein (amino acids Q8-E918) was used as the immunogen for the mSin3A antibody.

Storage

After reconstitution, the mSin3A antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

SIN3A antibody, Sin3 homolog A antibody, paired amphipathic helix protein Sin3A antibody, transcriptional corepressor SIN3A antibody, SIN3 transcription regulator homolog A antibody, histone deacetylase complex-associated protein antibody

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