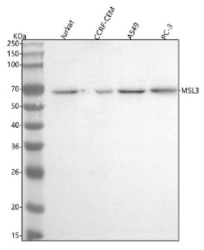
MSL3 Antibody / Male-specific lethal 3 (FY12229)

Catalog No.	Formulation	Size
FY12229	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q8N5Y2
Applications	ELISA: 0.1-0.5ug/ml Western Blot: 0.25-0.5ug/ml
Limitations	This MSL3 antibody is available for research use only.



Western blot analysis of MSL3 using anti-MSL3 antibody. Lane 1: human Jurkat whole cell lysates, Lane 2: human CCRF-CEM whole cell lysates, Lane 3: human whole cell lysates, Lane 4: human PC-3 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-MSL3 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. The expected band size for MSL3 is at 60 kDa, but is commonly observed at 60-70 kDa.

Description

MSL3 antibody detects Male-specific lethal 3 homolog, encoded by the MSL3 gene on chromosome Xp22.2. MSL3 antibody is widely applied in research on chromatin modification, transcriptional regulation, and dosage compensation. MSL3 is a chromatin-associated protein that functions as part of the MSL complex, which acetylates histone H4 at lysine 16 to regulate chromatin structure and gene expression. Originally studied in Drosophila where it plays a role in X-

chromosome dosage compensation, the human homolog has conserved functions in epigenetic regulation.

Structurally, MSL3 is a ~60 kDa protein that contains a chromo-related domain mediating interactions with nucleosomes and other chromatin proteins. It associates with MSL1, MSL2, and MOF (KAT8), forming the human MSL complex. This complex directs acetylation of histones, altering higher-order chromatin architecture. Alternative isoforms of MSL3 exist, potentially diversifying functional roles in different tissues.

Functionally, MSL3 facilitates H4K16 acetylation, which opens chromatin to promote transcription. This modification influences gene expression broadly and is linked to transcriptional elongation. In addition to its chromatin roles, MSL3 participates in DNA damage response pathways by modulating chromatin accessibility during repair. Loss of MSL3 function disrupts chromatin organization and transcriptional regulation. Researchers use MSL3 antibody to study histone modifications, dosage compensation, and epigenetic control of gene expression.

Clinically, MSL3 mutations are associated with developmental disorders, including intellectual disability and autism spectrum traits. Pathogenic variants impair chromatin regulation, leading to global transcriptional dysregulation. MSL3 also has links to cancer, where altered acetylation patterns contribute to oncogenesis. As chromatin modifiers are druggable targets, MSL3 is a protein of interest in epigenetic therapy research. NSJ Bioreagents offers MSL3 antibody as a tool for chromatin biology and epigenetic studies.

Experimentally, MSL3 antibody is used in western blotting to detect the ~60 kDa protein, in chromatin immunoprecipitation (ChIP) to assess histone acetylation patterns, and in immunohistochemistry to analyze tissue expression. Co-immunoprecipitation with MSL3 antibody identifies interaction partners within the MSL complex and other chromatin regulators.

Application Notes

Optimal dilution of the MSL3 antibody should be determined by the researcher.

Immunogen

E.coli-derived human SLC7A7 recombinant protein (Position: M1-D498) was used as the immunogen for the MSL3 antibody.

Storage

After reconstitution, the MSL3 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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