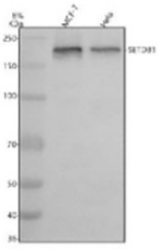
SETDB1 Antibody / Histone Methyltransferase Antibody (FY12807)

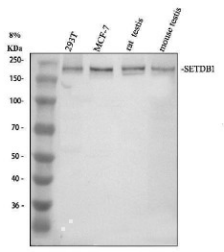
Catalog No.	Formulation	Size
FY12807	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
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	Q15047
Applications	Western Blot: 0.25-0.5ug/ml ELISA: 0.1-0.5ug/ml
Limitations	This SETDB1 Antibody / Histone Methyltransferase Antibody is available for research use only.



SETDB1 Antibody Human Cancer Cell WB. Western blot analysis detected SETDB1 in human MCF-7 (lane 1) and HeLa (lane 2) cell lysates as a prominent band migrating at approximately 180 kDa. Although the predicted molecular weight of SETDB1 is about 143 kDa, the protein commonly migrates between 170 and 190 kDa because of post-translational modifications, including SUMOylation, and its biochemical properties. This SETDB1 Antibody, a Histone Methyltransferase Antibody, is suitable for detecting endogenous SETDB1 in studies of histone methylation, epigenetic regulation, chromatin remodeling and transcriptional repression.



SETDB1 Antibody Human, Mouse and Rat WB. Western blot analysis detected SETDB1 in human 293T (lane 1) and MCF-7 (lane 2) cell lysates, rat testis (lane 3) and mouse testis (lane 4). A prominent immunoreactive band was observed at approximately 180 kDa in all samples. Although the predicted molecular weight of SETDB1 is about 143 kDa, the protein routinely migrates at a higher apparent molecular weight because of post-translational modifications, including SUMOylation. This SETDB1 Antibody, a Histone Methyltransferase Antibody, demonstrates cross-species reactivity and is suitable for studies of histone methylation, epigenetic regulation and chromatin remodeling.

Description

SETDB1 Antibody / Histone Methyltransferase Antibody recognizes SET Domain Bifurcated Protein 1 (SETDB1), a lysine methyltransferase that catalyzes methylation of histone H3 lysine 9, a key epigenetic modification associated with transcriptional repression and heterochromatin formation. SETDB1 is a central regulator of chromatin organization, gene silencing and genome stability, functioning within multi-protein chromatin remodeling complexes to establish and maintain repressive chromatin domains. Through these activities, SETDB1 influences cellular differentiation, development and maintenance of cell identity. NSJ Bioreagents provides SETDB1 antibodies for investigations of epigenetic regulation, chromatin biology and transcriptional control.

SETDB1 is localized predominantly within the nucleus, where it interacts with numerous transcriptional repressors, histone-modifying enzymes and chromatin-associated proteins. In addition to regulating endogenous gene expression, SETDB1 plays an important role in silencing endogenous retroviral elements and repetitive DNA sequences, thereby helping preserve genomic integrity. The enzyme also participates in stem cell maintenance, embryonic development and immune regulation by controlling lineage-specific transcriptional programs through targeted histone methylation.

Abnormal SETDB1 expression or activity has been linked to numerous human diseases, including melanoma, lung cancer, liver cancer and other malignancies in which epigenetic dysregulation contributes to tumor progression. Increased SETDB1 activity may promote oncogenic transcriptional programs and suppress tumor suppressor genes, while altered chromatin methylation has also been implicated in neurological disorders and developmental abnormalities. Consequently, SETDB1 has become an important target for studies of cancer epigenetics, chromatin remodeling and therapeutic development directed toward epigenetic enzymes.

A SETDB1 Antibody is a valuable reagent for detecting this nuclear histone methyltransferase by Western blotting, immunohistochemistry, immunofluorescence, immunoprecipitation and related immunoassays. By enabling reliable analysis of protein expression and localization, a SETDB1 Antibody supports investigations of histone methylation, epigenetic regulation, chromatin organization and transcriptional repression.

Researchers studying chromatin remodeling and epigenetic regulation may also be interested in our Epigenetics Research Antibodies page, featuring antibodies against histone modifiers, chromatin regulators and transcriptional control proteins.

Application Notes

Optimal dilution of the SETDB1 Antibody / Histone Methyltransferase Antibody should be determined by the researcher.

Immunogen

E.coli-derived human SETDB1 recombinant protein (Position: E20-E871) was used as the immunogen for the SETDB1 antibody.

Storage

After reconstitution, the SETDB1 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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