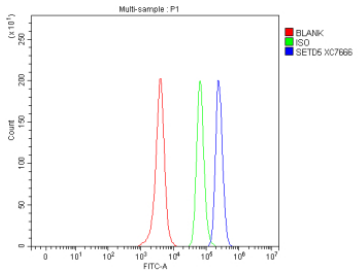
SETD5 Antibody / SET domain-containing protein 5 (FY12907)

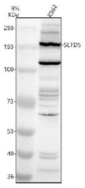
Catalog No.	Formulation	Size
FY12907	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

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	Q9C0A6
Applications	Western Blot: 0.25-0.5ug/ml Flow cytometry: 1-3ug/million cells ELISA: 0.1-0.5ug/ml
Limitations	This SETD5 antibody is available for research use only.



Flow Cytometry analysis of SH-SY5Y cells using anti-SETD5 antibody. Overlay histogram showing SH-SY5Y cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-SETD5 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



Western blot analysis of SETD5 using anti-SETD5 antibody. Electrophoresis was performed on a 8% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human K562 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-SETD5 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 an ECL Plus Western Blotting Substrate. A dominant band is observed near the expected ~158 kDa molecular weight, with an additional strong band at ~110-120 kDa. The lower band is consistent with truncated or alternatively spliced SETD5 isoforms described in the literature.

Description

SETD5 antibody detects SET domain-containing protein 5, a chromatin-associated enzyme implicated in epigenetic regulation, transcriptional control, and neurodevelopment. Encoded by the SETD5 gene on chromosome 3p25.3, this protein contains a conserved SET (Su(var)3-9, Enhancer-of-zeste, Trithorax) domain characteristic of lysine methyltransferases. Although its precise enzymatic targets remain under investigation, SETD5 is thought to influence chromatin structure and gene accessibility by interacting with histone-modifying and transcriptional complexes.

Structurally, SETD5 is a large nuclear protein of approximately 1,442 amino acids and 170 kilodaltons containing an N-terminal SET domain and coiled-coil regions that mediate interactions with epigenetic cofactors such as HDAC3 and PAF1C. SETD5 localizes primarily to euchromatin, where it contributes to transcriptional repression and developmental gene regulation. It is broadly expressed, with highest levels in brain and embryonic tissues, supporting its essential role in differentiation and neurogenesis.

The SETD5 antibody is widely used in epigenetics, neuroscience, and developmental biology research to study chromatin remodeling, gene silencing, and neurodevelopmental disorders. Western blot analysis detects a 170 kilodalton band corresponding to SETD5, while immunofluorescence demonstrates nuclear localization with punctate chromatin-associated staining. This antibody provides a reliable reagent for assessing epigenetic enzyme expression and chromatin regulatory function.

Loss-of-function mutations in SETD5 are associated with autosomal dominant intellectual disability and developmental delay syndromes. Functional studies show that SETD5 regulates genes involved in cell cycle control, neural differentiation, and synapse formation through coordination of histone deacetylation and RNA polymerase II elongation. It acts as an integrator of epigenetic and transcriptional machinery, maintaining proper expression of developmental regulators. Dysregulated SETD5 expression has been linked to tumor progression, particularly in cancers with altered chromatin modification landscapes. The SETD5 antibody provides an essential tool for exploring the interplay between chromatin dynamics, transcriptional control, and development. NSJ Bioreagents validates this antibody for its applications, ensuring dependable performance in epigenetic research.

Application Notes

Optimal dilution of the SETD5 antibody should be determined by the researcher.

Immunogen

E.coli-derived human SETD5 recombinant protein (Position: Q196-R1275) was used as the immunogen for the SETD5 antibody.

Storage

After reconstitution, the SETD5 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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