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HYPB / SETD2 (internal region) Antibody (internal region)

Peptide-affinity purified goat antibody
Catalog # AF2647a

Specification

HYPB / SETD2 (internal region) Antibody (internal region) - Product Information

Application	**WB**
Primary Accession	Q9BYW2
Other Accession	NP_054878.5, 29072, 235626 (mouse)
Reactivity	**Mouse**
Predicted	**Human, Pig, Dog**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**0.5 mg/ml**
Isotype	**IgG**
Calculated MW	**287597**

HYPB / SETD2 (internal region) Antibody (internal region) - Additional Information

Gene ID 29072

Other Names
Histone-lysine N-methyltransferase SETD2, 2.1.1.43, HIF-1, Huntingtin yeast partner B, Huntingtin-interacting protein 1, HIP-1, Huntingtin-interacting protein B, Lysine N-methyltransferase 3A, SET domain-containing protein 2, hSET2, p231HBP, SETD2, HIF1, HYPB, KIAA1732, KMT3A, SET2

Format
0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
HYPB / SETD2 (internal region) Antibody (internal region) is for research use only and not for use in diagnostic or therapeutic

AF2647a (0.5 µg/ml) staining of mouse fibroblast lysates transiently expressing different siRNA in second and third lane (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

HYPB / SETD2 (internal region) Antibody (internal region) - References

Identification and characterization of a novel human histone H3 lysine 36-specific methyltransferase. Sun XJ, Wei J, Wu XY, Hu M, Wang L, Wang HH, Zhang QH, Chen SJ, Huang QH, Chen Z. J Biol Chem. 2005 Oct 21;280(42):35261-71. Epub 2005 Aug 22. PMID: 16118227

procedures.

HYPB / SETD2 (internal region) Antibody (internal region) - Protein Information

Name SETD2

Function
Histone methyltransferase that specifically trimethylates 'Lys-36' of histone H3 (H3K36me3) using dimethylated 'Lys-36' (H3K36me2) as substrate (PubMed:16118227, PubMed:19141475, PubMed:21526191, PubMed:21792193, PubMed:23043551, PubMed:27474439). It is capable of trimethylating unmethylated H3K36 (H3K36me0) in vitro (PubMed:19332550). Represents the main enzyme generating H3K36me3, a specific tag for epigenetic transcriptional activation (By similarity). Plays a role in chromatin structure modulation during elongation by coordinating recruitment of the FACT complex and by interacting with hyperphosphorylated POLR2A (PubMed:23325844). Acts as a key regulator of DNA mismatch repair in G1 and early S phase by generating H3K36me3, a mark required to recruit MSH6 subunit of the MutS alpha complex: early recruitment of the MutS alpha complex to chromatin to be replicated allows a quick identification of mismatch DNA to initiate the mismatch repair reaction (PubMed:23622243). Required for DNA double-strand break repair in response to DNA damage: acts by

mediating formation of H3K36me3, promoting recruitment of RAD51 and DNA repair via homologous recombination (HR) (PubMed:24843002). Acts as a tumor suppressor (PubMed:24509477). H3K36me3 also plays an essential role in the maintenance of a heterochromatic state, by recruiting DNA methyltransferase DNMT3A (PubMed:27317772). H3K36me3 is also enhanced in intron-containing genes, suggesting that SETD2 recruitment is enhanced by splicing and that splicing is coupled to recruitment of elongating RNA polymerase (PubMed:21792193). Required during angiogenesis (By similarity). Required for endoderm development by promoting embryonic stem cell differentiation toward endoderm: acts by mediating formation of H3K36me3 in distal promoter regions of FGFR3, leading to regulate transcription initiation of FGFR3 (By similarity). In addition to histones, also mediates methylation of other proteins, such as tubulins and STAT1 (PubMed:27518565, PubMed:28753426). Trimethylates 'Lys-40' of alpha-tubulins such as TUBA1B (alpha- TubK40me3); alpha-TubK40me3 is required for normal mitosis and cytokinesis and may be a specific tag in cytoskeletal remodeling (PubMed:27518565). Involved in interferon-alpha-induced antiviral defense by mediating both monomethylation of STAT1 at 'Lys-525' and catalyzing H3K36me3 on promoters of some interferon-stimulated genes (ISGs) to activate gene transcription (PubMed:28753426).

Cellular Location
Nucleus {ECO:0000250|UniProtKB:E9Q5F9}.

Chromosome
{ECO:0000250|UniProtKB:E9Q5F9}

Tissue Location
Ubiquitously expressed.

HYPB / SETD2 (internal region) Antibody (internal region) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture