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Anti-Human ESET (RABBIT) Antibody
ESET Antibody
Catalog # ASR5276

Specification

Anti-Human ESET (RABBIT) Antibody - Product Information

Host	**Rabbit**
Conjugate	**Unconjugated**
Target Species	**Human**
Reactivity	**Human**
Clonality	**Polyclonal**
Application	**WB, IHC, E, I, LCI**
Application Note	**This affinity purified antibody has been tested for use in ELISA and western blotting. Western blotting shows reactivity specific for human ESET detecting a band at approximately 170 kDa. Specific band detection by western blot is blocked by peptide competition by pre-incubating the antibody with the immunizing peptide prior to reaction with the membrane. Reactivity in other immunoassays is unknown.**
Physical State	**Liquid (sterile filtered)**
Buffer	**0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2**
Immunogen	**This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to amino acids 1050-1075 of human ESET.**
Preservative	**0.01% (w/v) Sodium Azide**

Anti-Human ESET (RABBIT) Antibody - Additional Information

Gene ID 9869

Other Names
9869

Purity
This is an affinity purified antibody produced by immunoaffinity chromatography using the immunizing peptide after immobilization to a solid phase. Reactivity occurs against human ESET protein.

Storage Condition
Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Precautions Note
This product is for research use only and is not intended for therapeutic or diagnostic applications.

Anti-Human ESET (RABBIT) Antibody - Protein Information

Name SETDB1 (HGNC:10761)

Function
Histone methyltransferase that specifically trimethylates 'Lys-9' of histone H3. H3 'Lys-9' trimethylation represents a specific tag for epigenetic transcriptional repression by recruiting HP1 (CBX1, CBX3 and/or CBX5) proteins to methylated histones. Mainly functions in euchromatin regions, thereby playing a central role in the silencing of euchromatic genes. H3 'Lys-9' trimethylation is coordinated with DNA methylation (PubMed:12869583). Required for HUSH-mediated heterochromatin formation and gene silencing. Forms a complex with MBD1 and ATF7IP that represses transcription and couples DNA methylation and histone 'Lys-9' trimethylation (PubMed:14536086, PubMed:27732843). Its activity is dependent on MBD1 and is heritably maintained through DNA replication by being recruited by CAF-1 (PubMed:14536086). SETDB1 is targeted to histone H3 by TRIM28/TIF1B, a factor recruited by KRAB zinc-finger proteins. Probably forms a corepressor complex required for activated KRAS-mediated promoter hypermethylation and transcriptional silencing of tumor suppressor genes (TSGs) or other tumor-related genes in colorectal cancer (CRC) cells (PubMed:24623306). Required to maintain a transcriptionally repressive state of genes in undifferentiated embryonic stem cells (ESCs) (PubMed:24623306). In ESCs, in collaboration with TRIM28, is also required for H3K9me3 and silencing of endogenous and introduced retroviruses in a DNA- methylation independent-pathway (By similarity). Associates at promoter regions of tumor suppressor genes (TSGs) leading to their gene silencing (PubMed:24623306). The SETDB1-TRIM28-ZNF274 complex may play a role in recruiting ATRX to the 3'-exons of zinc-finger coding genes with atypical chromatin signatures to establish or maintain/protect H3K9me3 at these transcriptionally active regions (PubMed:27029610).

Cellular Location
Nucleus. Cytoplasm. Chromosome. Note=Associated with non- pericentromeric regions of chromatin. Excluded from nucleoli and islands of condensed chromatin.

Tissue Location
Widely expressed. High expression in testis.

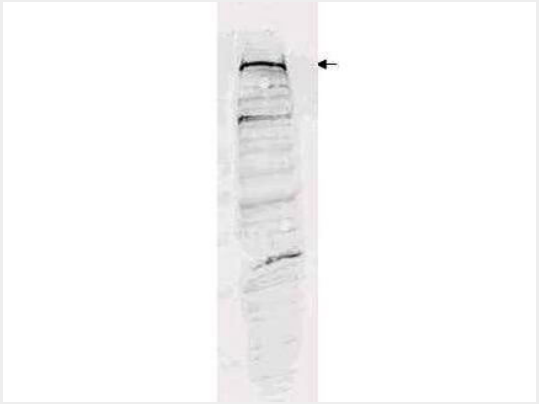
Anti-Human ESET (RABBIT) Antibody - Protocols

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

Anti-Human ESET (RABBIT) Antibody - Images



Western blot analysis is shown using Rockland's Affinity Purified anti-ESET antibody to detect human ESET present in a 293 whole cell lysate (p/n W09-000-365). ~30 µg of lysate was loaded per lane for SDS-PAGE. Comparison to a molecular weight marker (not shown) indicates a single band of ~170 kDa is detected. Peptide competition (not shown) blocks staining of this band. The blot was incubated with a 1:1000 dilution of the antibody at room temperature for 2 h followed by detection using IRDye™800 labeled Goat-a-Rabbit IgG [H&L] (p/n 611-132-122) diluted 1:5,000 for 45 min. IRDye™800 fluorescence image was captured using the Odyssey® Infrared Imaging System developed by LI-COR. IRDye is a trademark of LI-COR, Inc. Other detection systems will yield similar results.

Anti-Human ESET (RABBIT) Antibody - Background

The SET domain is a highly conserved, approximately 150-amino acid motif implicated in the modulation of chromatin structure. It was originally identified as part of a larger conserved region present in the Drosophila trithorax protein and was subsequently identified in the Drosophila Su(var)3-9 and 'Enhancer of zeste' proteins, from which the acronym SET is derived. Studies have suggested that the SET domain may be a signature of proteins that modulate transcriptionally active or repressed chromatin states through chromatin remodeling activities. ESET functions as a histone methyltransferase by methylation of Lys-9 of histone H3. H3 Lys-9 methylation represents a specific tag for epigenetic transcriptional repression by recruiting HP1 proteins to methylated histones. ESET shows a nuclear localization and is associated with non-pericentromeric regions of chromatin, and is excluded from nucleoli and islands of condensed chromatin. Although ESET is a widely expressed protein, it is highly expressed in the testis.