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Rabbit Anti-SET/Biotin Conjugated antibody

SL5943R-Bio

Product Name	Anti-SET/Biotin
Chinese Name	生物素标记的 SET 易位蛋白/髓系白血病相关蛋白抗体
Alias	2PP2A; HLA DR associated protein II; HLA-DR-associated protein II; I 2PP2A; I-2PP2A; I2PP2A; IGAAD; Inhibitor of granzyme A activated DNase; Inhibitor of granzyme A-activated DNase; PHAPII; Phosphatase 2A inhibitor I2PP2A; Protein SET; Set; SET translocation; SET translocation (myeloid leukemia-associated); SET_HUMAN; TAF I; TAF IBETA; TAF-I; TAFI; Template activating factor I; Template-activating factor I.
Research Area	Tumour Cell biology immunology Chromatin and nuclear signals Signal transduction Apoptosis Cyclin t-lymphocyte
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Human(predicted:Mouse,Rat,Chicken,Dog,Cow,Horse,Rabbit)
Applications	ICC/IF=1:100-500,WB=1000-10000,Flow-Cyt=1ug/test not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight	32kDa
Form	Lyophilized or Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human SET translocation.
Lsotype	IgG
Purification	affinity purified by Protein A
Storage Buffer	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 1M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
Product Detail	**background:** Multitasking protein, involved in apoptosis, transcription, nucleosome assembly and histone binding. Isoform 2 anti-apoptotic activity is mediated by

inhibition of the GZMA-activated DNase, NME1. In the course of cytotoxic T-lymphocyte (CTL)-induced apoptosis, GZMA cleaves SET, disrupting its binding to NME1 and releasing NME1 inhibition. Isoform 1 and isoform 2 are potent inhibitors of protein phosphatase 2A. Isoform 1 and isoform 2 inhibit EP300/CREBBP and PCAF-mediated acetylation of histones (HAT) and nucleosomes, most probably by masking the accessibility of lysines of histones to the acetylases. The predominant target for inhibition is histone H4. HAT inhibition leads to silencing of HAT-dependent transcription and prevents active demethylation of DNA. Both isoforms stimulate DNA replication of the adenovirus genome complexed with viral core proteins; however, isoform 2 specific activity is higher.

Function:
ultitasking protein, involved in apoptosis, transcription, nucleosome assembly and histone binding. Isoform 2 anti-apoptotic activity is mediated by inhibition of the GZMA-activated DNase, NME1. In the course of cytotoxic T-lymphocyte (CTL)-induced apoptosis, GZMA cleaves SET, disrupting its binding to NME1 and releasing NME1 inhibition. Isoform 1 and isoform 2 are potent inhibitors of protein phosphatase 2A. Isoform 1 and isoform 2 inhibit EP300/CREBBP and PCAF-mediated acetylation of histones (HAT) and nucleosomes, most probably by masking the accessibility of lysines of histones to the acetylases. The predominant target for inhibition is histone H4. HAT inhibition leads to silencing of HAT-dependent transcription and prevents active demethylation of DNA. Both isoforms stimulate DNA replication of the adenovirus genome complexed with viral core proteins; however, isoform 2 specific activity is higher.

Subunit:
Isoform 1 and isoform 2 interact directly with each other and with ANP32A within the tripartite INHAT (inhibitor of acetyltransferases) complex. Isoform 1 and isoform 2 interact also with histones. Isoform 2 is a component of the SET complex, which also contains ANP32A, APEX1, HMGB2 and NME1, but not NME2. Within this complex, directly interacts with NME1 and with HMGB2. Interacts with SETBP1. Interacts with SGOL1. Interacts with APBB1.

Subcellular Location:
Cytoplasm > cytosol. Endoplasmic reticulum. Nucleus > nucleoplasm. In the cytoplasm, found both in the cytosol and associated with the endoplasmic reticulum. Following CTL attack, moves rapidly to the nucleus, where it is found in the nucleoplasm, avoiding the nucleolus. Similar translocation to the nucleus is also observed for lymphocyte-activated killer cells after the addition of calcium. The SET complex is associated with the endoplasmic reticulum.

Tissue Specificity:
Widely expressed. Low levels in quiescent cells during serum starvation, contact inhibition or differentiation. Highly expressed in Wilms' tumor

Post-translational modifications:
Isoform 2 is phosphorylated on Ser-15 and Thr-23.
Isoform 2 is acetylated on Lys-11.
Some glutamate residues are glycylated by TTLL8. This modification occurs exclusively on glutamate residues and results in a glycine chain on the gamma-carboxyl group.
N-terminus of isoform 1 is methylated by METTL11A/NTM1. Mainly trimethylated.

DISEASE:
Note=A chromosomal aberration involving SET is found in some cases of acute undifferentiated leukemia (AUL). Translocation t(6;9)(q21;q34.1) with NUP214/CAN.

Similarity:
Belongs to the nucleosome assembly protein (NAP) family.

Database links:

Entrez Gene: 6418 Human

Entrez Gene: 56086 Mouse

Entrez Gene: 671392 Mouse

Entrez Gene: 307947 Rat

Omim: 600960 Human

SwissProt: Q01105 Human

SwissProt: Q9EQU5 Mouse

SwissProt: Q63945 Rat

Unigene: 436687 Human

Unigene: 596814 Human

Unigene: 335942 Mouse

Unigene: 76937 Rat

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Important Note:
This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.