

Setd1a polyclonal antibody
Rabbit Polyclonal Antibody
Catalog # ABV11377**Specification**

Setd1a polyclonal antibody - Product Information

Application	E, WB
Primary Accession	O15047
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	186034

Setd1a polyclonal antibody - Additional Information**Gene ID** 9739**Positive Control****Western blot: NIH3T3 and embryonic stem cells, ELISA: Peptides.
ELISA: 1:100, Western Blot: 1:500.****Application & Usage****Other Names**

SET1, SET1A, KMT2F

Target/Specificity

Setd1a

Antibody Form

Liquid

Appearance

Colorless liquid

Formulation

In PBS with 0.05% (W/V) sodium azide.

Handling

The antibody solution should be gently mixed before use.

Reconstitution & Storage

-20 °C

Background Descriptions**Precautions**

Setd1a polyclonal antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Setd1a polyclonal antibody - Protein Information

Name SETD1A**Function**

Histone methyltransferase that catalyzes methyl group transfer from S-adenosyl-L-methionine to the epsilon-amino group of 'Lys-4' of histone H3 (H3K4) via a non-processive mechanism (PubMed:25561738, PubMed:12670868). Part of chromatin remodeling machinery, forms H3K4me1, H3K4me2 and H3K4me3 methylation marks at active chromatin sites where transcription and DNA repair take place (PubMed:29937342, PubMed:31197650, PubMed:32346159). Responsible for H3K4me3 enriched promoters and transcriptional programming of inner mass stem cells and neuron progenitors during embryogenesis (By similarity) (PubMed:31197650). Required for H3K4me1 mark at stalled replication forks. Mediates FANCD2-dependent nucleosome remodeling and RAD51 nucleofilaments stabilization at reversed forks, protecting them from nucleolytic degradation (PubMed:29937342, PubMed:32346159). Does not methylate 'Lys-4' of histone H3 if the neighboring 'Lys-9' residue is already methylated (PubMed:12670868). Binds RNAs involved in RNA processing and the DNA damage response (PubMed:38003223).

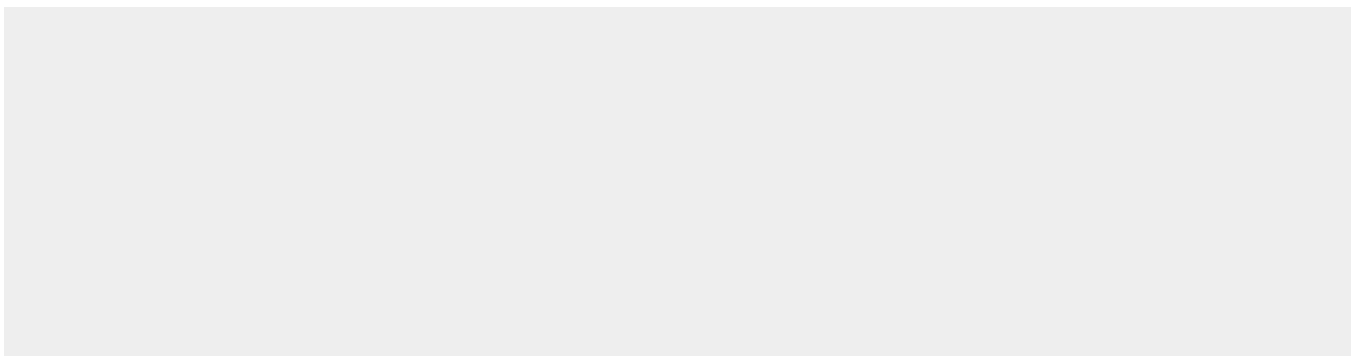
Cellular Location

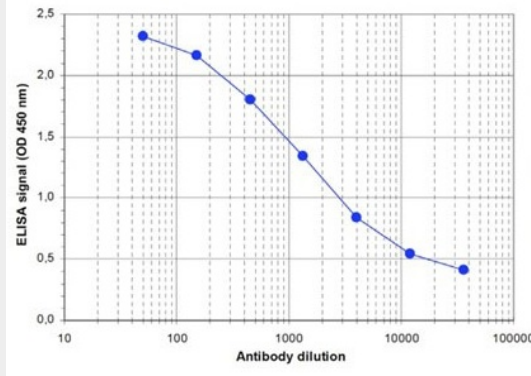
Nucleus speckle. Chromosome Cytoplasm. Note=Localizes to a largely non-overlapping set of euchromatic nuclear speckles with SETD1B, suggesting that SETD1A and SETD1B each bind to a unique set of target genes (PubMed:17355966). Predominantly nuclear (PubMed:38003223)

Setd1a polyclonal antibody - Protocols

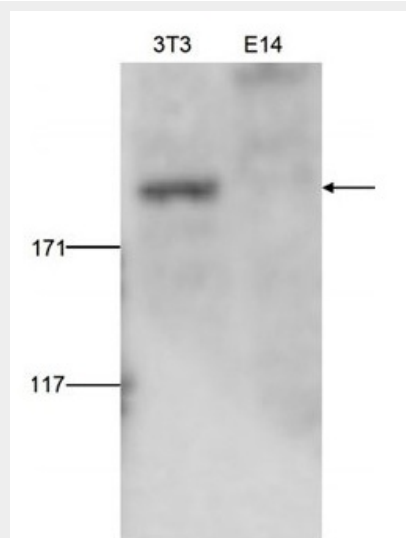
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Setd1a polyclonal antibody - Images



To determine the titer, an ELISA was performed using a serial dilution of the antibody. The wells were coated with the peptide used for immunization of the rabbit. By plotting the absorbance against the antibody dilution the titer of the antibody was estimated to be 1:2500.



Western blot was performed on whole cell lysates from mouse fibroblasts (NIH3T3) and embryonic stem cells (E14Tg2a) with the antibody diluted 1:500 in BSA/PBS-Tween. The molecular weight marker (in kDa) is shown on the left; the location of the protein of interest (expected size: 186 kDa) is indicated on the right.

Setd1a polyclonal antibody - Background

SETD1A is a component of the SET1 histone methyltransferase (HMT) complex. This complex specifically methylates lysine 4 of histone H3, but only if the neighboring lysine 9 residue is not yet methylated. Methylation of H3K4 represents a specific tag for epigenetic transcriptional activation. SETD1A shows a non-overlapping localization with SETD1B, suggesting that both proteins play a specific role in the epigenetic control of chromatin structure and gene expression.