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DOT1L Recombinant Monoclonal Antibody

Product Code	CSB-RA238318A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	Q8TEK3
Immunogen	A synthesized peptide derived from human KMT4 / Dot1L
Species Reactivity	Human
Tested Applications	ELISA, WB; Recommended dilution: WB:1:500-1:5000
Relevance	Histone methyltransferase. Methylates 'Lys-79' of histone H3. Nucleosomes are preferred as substrate compared to free histones. Binds to DNA.
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
lsotype	Rabbit IgG
Clonality	Monoclonal
Clonality Product Type	Monoclonal Recombinant Antibody
Clonality Product Type Immunogen Species	Monoclonal Recombinant Antibody Homo sapiens (Human)
Clonality Product Type Immunogen Species Research Area	Monoclonal Recombinant Antibody Homo sapiens (Human) Epigenetics and Nuclear Signaling
Clonality Product Type Immunogen Species Research Area Gene Names	Monoclonal Recombinant Antibody Homo sapiens (Human) Epigenetics and Nuclear Signaling DOT1L

Image



Western Blot

Positive WB detected in: A549 whole cell lysate, Hela whole cell lysate, 293T whole cell lysate All lanes: DOT1L antibody at 1:1000 Secondary Goat polyclonal to rabbit IgG at 1/50000 dilution Predicted band size: 165 kDa Observed band size: 165 kDa

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Immunofluorescence staining of Hela cell with CSB-RA238318A0HU at 1:30, counter-stained with DAPI. The cells were fixed in 4% formaldehyde and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4C. The secondary antibody was Alexa Fluor 488-congugated AffiniPure Goat Anti-Rabbit IgG(H+L).

Description

CUSABIO's product CSB-RA238318A0HU is prepared using protein and DNA recombinant technology. Initially, mice were immunized with a synthetic peptide from human DOT1L, and after a specific period, the spleen was removed aseptically. The RNA from the spleen cells was isolated, and the cDNA was generated through reverse transcription. The DOT1L antibody gene was amplified via PCR using this cDNA as a template. The obtained gene was inserted into a vector, which was then transfected into host cells for culturing. The DOT1L recombinant monoclonal antibody was purified from the cell culture supernatant using affinity chromatography and has been validated for use in ELISA and WB experiments to detect human DOT1L protein.

The DOT1L protein is specifically involved in the methylation of H3K79 on nucleosomes that contain histone H2B ubiquitinated at lysine 120 (H2Bub1). This modification is associated with the elongation phase of transcription, transcriptional activation, DNA repair, and maintenance of chromatin structure. The activity of DOT1L is thought to contribute to the proper regulation of gene expression during development and differentiation. Mutations in the DOT1L gene have been associated with certain types of leukemia.