

ARG54700 anti-EZH2 antibody [144CT2.1.1.5]

Package: 100 µl, 50 µl
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody recognizes EZH2
Tested Reactivity	Hu
Predict Reactivity	Mk
Tested Application	ICC/IF, IHC-P, WB
Host	Mouse
Clonality	Monoclonal
Clone	144CT2.1.1.5
Isotype	IgG1 Kappa
Target Name	EZH2
Immunogen	EZH2 recombinant protein.
Conjugation	Un-conjugated
Alternate Names	ENX-1; Lysine N-methyltransferase 6; KMT6; ENX1; WVS2; WVS; Enhancer of zeste homolog 2; EZH2b; Histone-lysine N-methyltransferase EZH2; EZH1; EC 2.1.1.43; KMT6A

Application Instructions

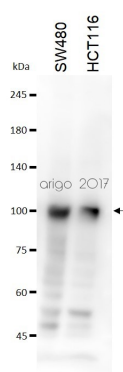
Application table	Application	Dilution
	ICC/IF	1:10 - 1:50
	IHC-P	1:10 - 1:50
	WB	1:100 - 1:500
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	

Properties

Purification	Protein G purified
Buffer	PBS and 0.09% (W/V) Sodium azide
Preservative	0.09% (W/V) Sodium azide
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

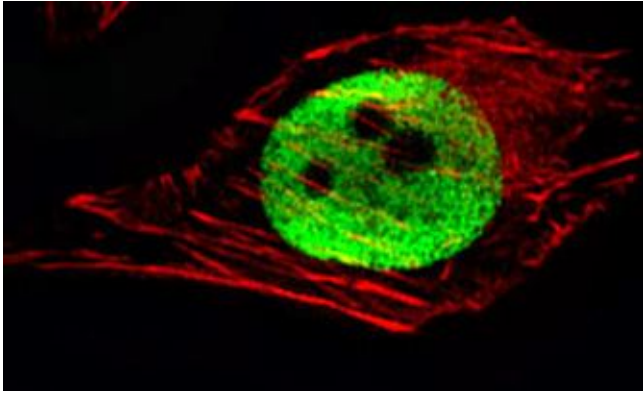
Database links	GeneID: 2146 Human Swiss-port # Q15910 Human
Gene Symbol	EZH2
Gene Full Name	enhancer of zeste 2 polycomb repressive complex 2 subunit
Background	This gene encodes a member of the Polycomb-group (PcG) family. PcG family members form multimeric protein complexes, which are involved in maintaining the transcriptional repressive state of genes over successive cell generations. This protein associates with the embryonic ectoderm development protein, the VAV1 oncoprotein, and the X-linked nuclear protein. This protein may play a role in the hematopoietic and central nervous systems. Multiple alternatively spliced transcript variants encoding distinct isoforms have been identified for this gene. [provided by RefSeq, Feb 2011]
Function	Polycomb group (PcG) protein. Catalytic subunit of the PRC2/EED-EZH2 complex, which methylates 'Lys-9' (H3K9me) and 'Lys- 27' (H3K27me) of histone H3, leading to transcriptional repression of the affected target gene. Able to mono-, di- and trimethylate 'Lys-27' of histone H3 to form H3K27me1, H3K27me2 and H3K27me3, respectively. Compared to EZH2-containing complexes, it is more abundant in embryonic stem cells and plays a major role in forming H3K27me3, which is required for embryonic stem cell identity and proper differentiation. The PRC2/EED-EZH2 complex may also serve as a recruiting platform for DNA methyltransferases, thereby linking two epigenetic repression systems. Genes repressed by the PRC2/EED-EZH2 complex include HOXC8, HOXA9, MYT1, CDKN2A and retinoic acid target genes. EZH2 can also methylate non-histone proteins such as the transcription factor GATA4 and the nuclear receptor RORA. Regulates the circadian clock via histone methylation at the promoter of the circadian genes. Essential for the CRY1/2-mediated repression of the transcriptional activation of PER1/2 by the CLOCK-ARNTL/BMAL1 heterodimer; involved in the di and trimethylation of 'Lys-27' of histone H3 on PER1/2 promoters which is necessary for the CRY1/2 proteins to inhibit transcription. [From Uniprot]
Research Area	Cancer antibody; Gene Regulation antibody; Polycomb Complexes antibody
Calculated Mw	85 kDa
PTM	Phosphorylated by AKT1. Phosphorylation by AKT1 reduces methyltransferase activity. Phosphorylation at Thr-345 by CDK1 and CDK2 promotes maintenance of H3K27me3 levels at EZH2-target loci, thus leading to epigenetic gene silencing. Sumoylated. Glycosylated: O-GlcNAcylation at Ser-75 by OGT increases stability of EZH2 and facilitates the formation of H3K27me3 by the PRC2/EED-EZH2 complex.
Cellular Localization	Nucleus

Images



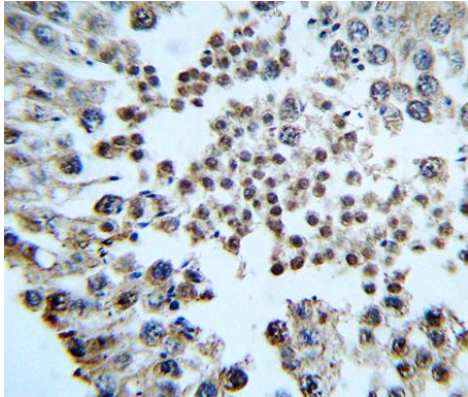
ARG54700 anti-EZH2 antibody WB image

Western blot: 20 µg of SW480 and HCT116 cell lysates stained with ARG54700 anti-EZH2 antibody at 1:100 dilution.



ARG54700 anti-EZH2 antibody ICC/IF image

Immunofluorescence: U251 cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then stained with ARG54700 anti-EZH2 antibody (1:25, 1 h at 37°C). Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (7 units/ml, 1 h at 37°C).



ARG54700 anti-EZH2 antibody IHC-P image

Immunohistochemistry: Formalin-fixed and paraffin-embedded Human testis tissue stained with ARG54700 anti-EZH2 antibody.