

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.

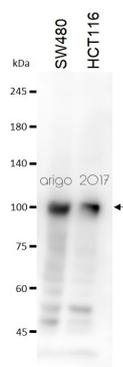
Properties

| | |
|---------------------|--|
| 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. |

Bioinformation

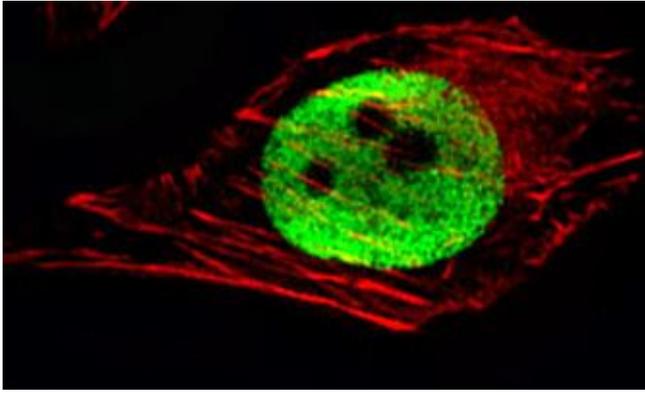
| | |
|-----------------------|--|
| Database links | GeneID: 2146 Human Swiss-port # Q15910 Human |
| Gene Symbol | EZH2 |
| Gene Full Name | enhancer of zeste 2 polycomb repressive complex 2 subunit |
| Background | This gene encodes a member of the Polycomb-group (PcG) family. PcG family members form 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



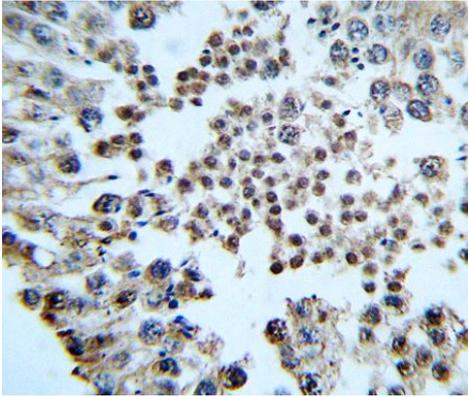
ARG54700 anti-EZH2 antibody WB image

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.