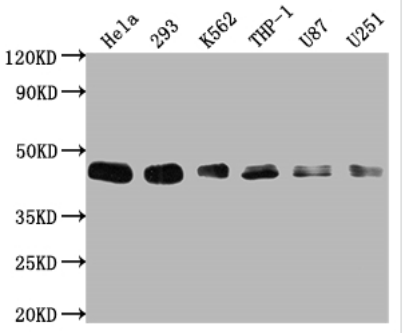
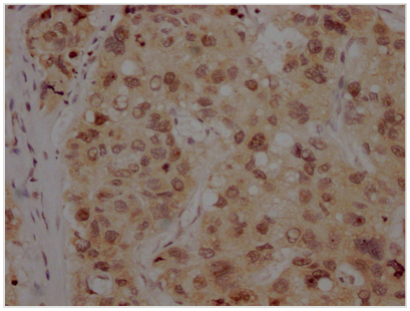
BMI1 Recombinant Monoclonal Antibody

Product Code	CSB-RA916472A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P35226
Immunogen	A synthesized peptide derived from human Bmi1
Species Reactivity	Human
Tested Applications	ELISA, WB, IHC; Recommended dilution: WB:1:500-1:5000, IHC:1:50-1:200
Relevance	Component of a Polycomb group (PcG) multiprotein PRC1-like complex, a complex class required to maintain the transcriptionally repressive state of many genes, including Hox genes, throughout development. PcG PRC1 complex acts via chromatin remodeling and modification of histones; it mediates monoubiquitination of histone H2A 'Lys-119', rendering chromatin heritably changed in its expressibility. In the PRC1 complex, it is required to stimulate the E3 ubiquitin-protein ligase activity of RNF2/RING2.
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
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Epigenetics and Nuclear Signaling; Cancer; Cell biology; Stem cells
Gene Names	BMI1
Clone No.	1F2

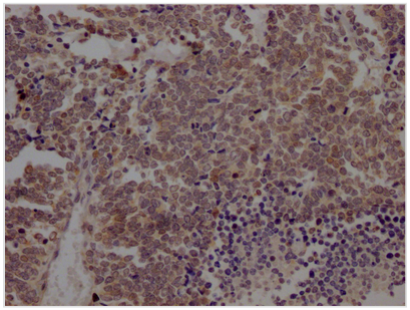
Image



Western Blot
Positive WB detected in: Hela whole cell lysate, 293 whole cell lysate, K562 whole cell lysate, THP-1 whole cell lysate, U87 whole cell lysate, U251 whole cell lysate
All lanes: BMI1 antibody at 1:2000
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 37 kDa
Observed band size: 45 kDa



IHC image of CSB-RA916472A0HU diluted at 1:100 and staining in paraffin-embedded human liver cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.



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Description

The BMI1 recombinant monoclonal antibody is developed using recombinant DNA technology and is suitable for the recognition of human BMI1 protein in ELISA, WB, and IHC applications. First, the cDNA of the BMI1 antibody-producing hybridomas is sequenced, and the gene coding for the BMI1 monoclonal antibody is synthesized based on the sequence data. Hybridomas are produced by fusing myeloma cells and B cells from an animal immunized with a synthesized peptide derived from human BMI1. The synthesized gene is cloned into a vector. The recombinant vector is transfected into cells for cultivation. Finally, the resulting BMI1 recombinant monoclonal antibody is purified from the cell culture supernatant using affinity chromatography.

The BMI1 protein is a transcriptional regulator that plays a critical role in maintaining the self-renewal and pluripotency of stem cells. Specifically, BMI1 is a component of the polycomb repressive complex 1 (PRC1), which silences gene expression by modifying histones. BMI1 binds to specific DNA sequences and recruits PRC1 to the target genes, leading to the mono-ubiquitination of histone H2A at lysine 119, which represses gene transcription. BMI1 has been implicated in regulating the expression of genes involved in cell cycle control, stem cell maintenance, and DNA damage response. Dysregulation of BMI1 expression has been associated with various human cancers, including leukemia, lymphoma, and solid tumors.