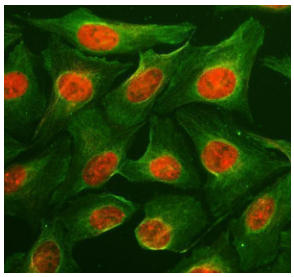
BMI1 Antibody (R31554)

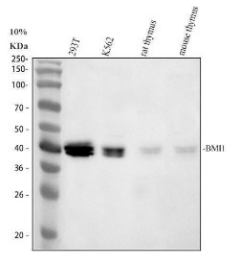
Catalog No.	Formulation	Size
R31554	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
Gene ID	648
Applications	Western blot: 0.5-1ug/ml Immunofluorescence: 5ug/ml
Limitations	This BMI1 antibody is available for research use only.



BMI1 Antibody U2OS Cell IF. Immunofluorescent staining of fixed and permeabilized U2OS cells with BMI1 Antibody (red) and an Alpha Tubulin antibody (green). Cells underwent enzyme antigen retrieval for 15 minutes, were blocked with 10% goat serum, and incubated overnight at 4 degrees C with rabbit anti-BMI1 antibody at 5 ug/ml and mouse anti-Alpha Tubulin antibody. Cy3- and Fluoro488-conjugated secondary antibodies were used at a 1:500 dilution. BMI1 exhibits predominantly nuclear staining, consistent with its function as a Polycomb Repressive Complex 1 component involved in epigenetic gene silencing. This BMI1 Antibody is suitable for studies of chromatin regulation, stem cell maintenance, and cancer biology.



BMI1 Antibody Human, Rat and Mouse WB. Western blot analysis of human 293T (lane 1) and K562 (lane 2) whole cell lysates, rat thymus (lane 3), and mouse thymus (lane 4) using BMI1 Antibody at 0.5 ug/ml. A specific band is detected at approximately 40 kDa in all samples, consistent with the expected migration of BMI1, which has a predicted molecular weight of approximately 37 kDa. A characteristic BMI1 doublet is also observed, consistent with the phosphorylation-dependent mobility shifts reported for BMI1 in the literature. This BMI1 Antibody is suitable for studies of Polycomb Repressive Complex 1 function, epigenetic gene regulation, stem cell maintenance, and cancer biology.

Description

BMI1 Antibody detects B lymphoma Mo MLV insertion region 1, also known as RNF51, a protein which in humans is encoded by the BMI1 gene. The gene is highly conserved in evolution as indicated by zoo blot hybridization with Bmi1 probes corresponding to the protein-encoding domain. By fluorescence in situ hybridization, the human gene is assigned to chromosome 10p13. It has a key role in regulating the proliferative activity of normal stem and progenitor cells. Most importantly, they provided evidence that the proliferative potential of leukemic stem and progenitor cells lacking BMI1 is compromised because they eventually undergo proliferation arrest and show signs of differentiation and apoptosis, leading to transplant failure of the leukemia. Complementation studies showed that the protein completely rescues these proliferative defects. Deletion analysis showed that the RING finger and helix-turn-helix domains of BMI1 were required for life span extension and repression of the tumor suppressor p16(INK4). BMI1 selectively extended the life span of these cultures. Confocal microscopy showed that the protein transiently colocalized with centromeres during interphase in HeLa cells.

Additional studies involving polycomb-mediated transcriptional repression, stem cell renewal, and epigenetic regulation pathways may benefit from our BMI1 antibody page featuring clone BMI1/2823 with HuProt protein microarray specificity validation.

Application Notes

The stated application concentrations are suggested starting amounts. Titration of the BMI1 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

An amino acid sequence from the middle region of human Bmi1 (IEFFDQNRLDRKVNKDKEKSKEEVNDKRYLR) was used as the immunogen for this BMI1 antibody.

Storage

After reconstitution, the BMI1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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