

RING1 Antibody / Polycomb complex protein RING1 (FY13095)

Catalog No.	Formulation	Size
FY13095	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Rat
Format	Lyophilized
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q06587
Applications	Western Blot: 0.25-0.5ug/ml Immunocytochemistry: 5ug/ml Immunofluorescence: 5ug/ml Flow Cytometry: 1-3ug/million cells ELISA: 0.1-0.5ug/ml
Limitations	This RING1 antibody is available for research use only.

Description

RING1 antibody detects E3 ubiquitin-protein ligase RING1, a chromatin-associated enzyme that catalyzes histone ubiquitination and transcriptional repression. The UniProt recommended name is E3 ubiquitin-protein ligase RING1 (RING1). This enzyme is a key component of the Polycomb repressive complex 1 (PRC1), which regulates gene silencing during development and differentiation.

Functionally, RING1 antibody identifies a 406-amino-acid nuclear enzyme containing a RING finger domain that mediates E3 ubiquitin ligase activity. RING1 monoubiquitinates histone H2A at lysine 119, a hallmark modification that represses transcription of developmental genes. It forms a heterodimer with RING1B or BMI1, together constituting the catalytic core of PRC1. This activity ensures stable repression of genes controlling cell fate and pluripotency.

The RING1 gene is located on chromosome 6p22.3 and is broadly expressed, with high levels in embryonic and stem cell populations. RING1 functions as an epigenetic regulator, linking chromatin compaction to long-term gene silencing. Its activity is modulated by PRC2-mediated H3K27 methylation, which recruits PRC1 to specific genomic loci.

Pathologically, deregulated RING1 expression contributes to developmental abnormalities and cancer. Overexpression of PRC1 components, including RING1, enhances chromatin repression and promotes oncogenic transformation. Conversely, loss of RING1 impairs differentiation and disrupts gene silencing. Research using RING1 antibody aids studies in epigenetic regulation, chromatin structure, and stem cell biology.

RING1 antibody is suitable for western blotting, immunoprecipitation, and chromatin immunoprecipitation to detect PRC1 complex components and histone modifications. NSJ Bioreagents supplies RING1 antibody reagents optimized for studies of gene silencing, ubiquitination, and developmental regulation.

Structurally, RING1 possesses an N-terminal RING finger motif coordinating two zinc ions essential for ubiquitin transfer. It interacts with E2 ubiquitin-conjugating enzymes to catalyze substrate modification. This antibody enables analysis of RING1Â's central role in chromatin remodeling and transcriptional repression through histone ubiquitination.

Application Notes

Optimal dilution of the RING1 antibody should be determined by the researcher.

Immunogen

E.coli-derived human RING1 recombinant protein (Position: N6-K387) was used as the immunogen for the RING1 antibody.

Storage

After reconstitution, the RING1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.