

# RYBP (A-1): sc-374235



The Power to Question

## BACKGROUND

The products of the Polycomb group (PcG) of genes are necessary for the maintenance of transcriptional repression of a number of important developmental genes, including the homeotic genes. RYBP is a member of the mammalian polycomb complex. RYBP (RING1- and YY1-binding protein) interacts specifically with the E2F2 and E2F3 family members, dependent on the marked box domain in these proteins. YY1 and RYBP, in combination with either E2F2 or E2F3, can stimulate Cdc6 promoter activity synergistically, at G<sub>1</sub>/S of the cell cycle. RYBP also complexes with both RING1 proteins (RING1 and RING1B) and with M33, two mutually interacting sets of proteins of the mammalian Polycomb complex. RING1 binds RYBP and M33 through the same C-terminal domain, whereas the RYBP-M33 interaction takes place through an M33 domain not involved in binding. RYBP is widely expressed with highest levels in lymphoid tissues and placenta.

## REFERENCES

1. Garcia, E., et al. 1999. RYBP, a new repressor protein that interacts with components of the mammalian Polycomb complex, and with the transcription factor YY1. *EMBO J.* 18: 3404-3418.
2. Zheng, L., et al. 2001. The death effector domain-associated factor plays distinct regulatory roles in the nucleus and cytoplasm. *J. Biol. Chem.* 276: 31945-31952.
3. Sawa, C., et al. 2002. YEAF1/RYPB and YAF-2 are functionally distinct members of a cofactor family for the YY1 and E4TF1/hGABP transcription factors. *J. Biol. Chem.* 277: 22484-22490.

## CHROMOSOMAL LOCATION

Genetic locus: RYBP (human) mapping to 3p13; Rybp (mouse) mapping to 6 D3.

## SOURCE

RYBP (A-1) is a mouse monoclonal antibody raised against amino acids 89-148 mapping within an internal region of RYBP of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-374235 X, 200 µg/0.1 ml.

RYBP (A-1) is available conjugated to agarose (sc-374235 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374235 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374235 PE), fluorescein (sc-374235 FITC), Alexa Fluor® 488 (sc-374235 AF488), Alexa Fluor® 546 (sc-374235 AF546), Alexa Fluor® 594 (sc-374235 AF594) or Alexa Fluor® 647 (sc-374235 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374235 AF680) or Alexa Fluor® 790 (sc-374235 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## APPLICATIONS

RYBP (A-1) is recommended for detection of RYBP of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

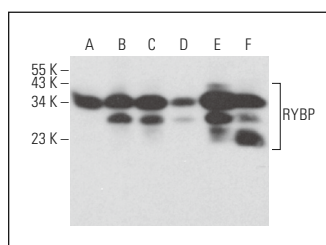
RYBP (A-1) is also recommended for detection of RYBP in additional species, including equine, canine and porcine.

Suitable for use as control antibody for RYBP siRNA (h): sc-106751, RYBP siRNA (m): sc-77379, RYBP shRNA Plasmid (h): sc-106751-SH, RYBP shRNA Plasmid (m): sc-77379-SH, RYBP shRNA (h) Lentiviral Particles: sc-106751-V and RYBP shRNA (m) Lentiviral Particles: sc-77379-V.

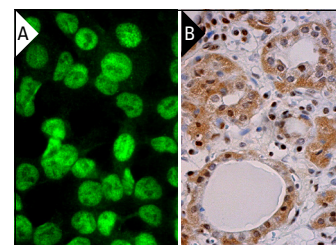
RYBP (A-1) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Positive Controls: HEL 92.1.7 cell lysate: sc-2270, F9 cell lysate: sc-2245 or PC-12 cell lysate: sc-2250.

## DATA



RYBP (A-1): sc-374235. Western blot analysis of RYBP expression in NCI-H460 (A), c4 (B), NIH/3T3 (C), HEL 92.1.7 (D), F9 (E) and PC-12 (F) whole cell lysates.



RYBP (A-1): sc-374235. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid gland tissue showing nuclear and cytoplasmic staining of glandular cells (B).

## SELECT PRODUCT CITATIONS

1. Li, M., et al. 2019. RYBP modulates stability and function of Ring1B through targeting UBE3A. *FASEB J.* 33: 683-695.
2. Li, L., et al. 2022. Rif1 interacts with non-canonical Polycomb repressive complex PRC1.6 to regulate mouse embryonic stem cells fate potential. *Cell Regen.* 11: 25.
3. Wang, H., et al. 2024. The E3 ubiquitin ligase RNF220 maintains hindbrain Hox expression patterns through regulation of WDR5 stability. *Elife* 13: RP94657.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.