

# YY1 (H-10): sc-7341

## BACKGROUND

The YY1 transcription factor, also known as NF-E1 (human) and Delta or UCRBP (mouse) is of interest due to its diverse effects on a wide variety of target genes. YY1 is broadly expressed in a wide range of cell types and contains four C-terminal zinc finger motifs of the Cys-Cys-His-His type and an unusual set of structural motifs at its N-terminal end. It binds to downstream elements in several vertebrate ribosomal protein genes, where it apparently acts positively to stimulate transcription and can act either negatively or positively in the context of the immunoglobulin  $\kappa$  3' enhancer and immunoglobulin heavy-chain  $\mu$ E1 site as well as the P5 promoter of the adeno-associated virus. It thus appears that YY1 is a bifunctional protein, capable of functioning as an activator in some transcriptional control elements and a repressor in others.

## REFERENCES

- Shi, Y., et al. 1991. Transcriptional repression by YY1, a human GLI-Krüppel-related protein, and relief of repression by adenovirus E1A protein. *Cell* 67: 377-388.
- Hariharan, N., et al. 1991. Delta, a transcription factor that binds to downstream elements in several polymerase II promoters, is a functionally versatile zinc finger protein. *Proc. Natl. Acad. Sci. USA* 88: 9799-9803.
- Park, K., et al. 1991. Isolation of a candidate repressor/activator, NF-E1 (YY-1, d), that binds to the immunoglobulin  $\kappa$  3' enhancer and the immunoglobulin heavy-chain  $\mu$ E1 site. *Proc. Natl. Acad. Sci. USA* 88: 9804-9808.

## CHROMOSOMAL LOCATION

Genetic locus: YY1 (human) mapping to 14q32.2; Yy1 (mouse) mapping to 12 F1.

## SOURCE

YY1 (H-10) is a mouse monoclonal antibody raised against amino acids 1-414 representing full length YY1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</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-7341 X, 200  $\mu$ g/0.1 ml.

YY1 (H-10) is available conjugated to agarose (sc-7341 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-7341 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-7341 PE), fluorescein (sc-7341 FITC), Alexa Fluor<sup>®</sup> 488 (sc-7341 AF488), Alexa Fluor<sup>®</sup> 546 (sc-7341 AF546), Alexa Fluor<sup>®</sup> 594 (sc-7341 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-7341 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-7341 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-7341 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor<sup>®</sup> is a trademark of Molecular Probes, Inc., Oregon, USA

## STORAGE

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

## APPLICATIONS

YY1 (H-10) is recommended for detection of YY1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

Suitable for use as control antibody for YY1 siRNA (h): sc-36863, YY1 siRNA (m): sc-36864, YY1 shRNA Plasmid (h): sc-36863-SH, YY1 shRNA Plasmid (m): sc-36864-SH, YY1 shRNA (h) Lentiviral Particles: sc-36863-V and YY1 shRNA (m) Lentiviral Particles: sc-36864-V.

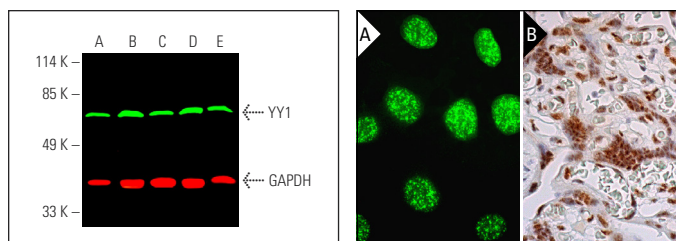
YY1 (H-10) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of cleaved YY1: 40 kDa.

Molecular Weight of YY1: 68 kDa.

Positive Controls: HuT 78 whole cell lysate: sc-2208, CCRF-CEM cell lysate: sc-2225 or BJAB nuclear extract: sc-2145.

## DATA



Simultaneous direct near-infrared western blot analysis of YY1 expression, detected with YY1 (H-10) Alexa Fluor<sup>®</sup> 680: sc-7341 AF680 and GAPDH expression, detected with GAPDH (0411) Alexa Fluor<sup>®</sup> 790: sc-47724 AF790 in HuT 78 (A) and CCRF-CEM (B) whole cell lysates and BJAB (C), MCF7 (D) and K-562 (E) nuclear extracts. Blocked with UltraCruz<sup>®</sup> Blocking Reagent: sc-516214.

YY1 (H-10): sc-7341. Immunofluorescence staining of formalin-fixed HeLa cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing nuclear staining of trophoblastic cells (B).

## SELECT PRODUCT CITATIONS

- Li, M., et al. 2000. ATF6 as a transcription activator of the endoplasmic reticulum stress element: thapsigargin stress-induced changes and synergistic interactions with NF-Y and YY1. *Mol. Cell. Biol.* 20: 5096-5106.
- Ihira, K., et al. 2017. EZH2 inhibition suppresses endometrial cancer progression via miR-361/Twist axis. *Oncotarget* 8: 13509-13520.
- Carter, H.N., et al. 2018. Effect of contractile activity on PGC-1 $\alpha$  transcription in young and aged skeletal muscle. *J. Appl. Physiol.* 124: 1605-1615.
- Sima, J., et al. 2019. Identifying *cis* elements for spatiotemporal control of mammalian DNA replication. *Cell* 176: 816-830.e18.

## RESEARCH USE

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