

## YY2 (A-5): sc-377008



The Power to Question

**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. 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. YY2, a ubiquitously expressed homologue of YY1, can bind to and regulate some promoters known to be controlled by YY1. YY2 contains both transcriptional repression and activation functions, but its exact functions are still unknown.

**REFERENCES**

- 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,  $\delta$ ), that binds to the immunoglobulin  $\kappa$  3' enhancer and the immunoglobulin heavy-chain  $\mu$ E1 site. *Proc. Natl. Acad. Sci. USA* 88: 9804-9808.
- 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.

**CHROMOSOMAL LOCATION**

Genetic locus: Yy2 (mouse) mapping to X.

**SOURCE**

YY2 (A-5) is a mouse monoclonal antibody raised against amino acids 100-178 mapping within an internal region of YY2 of mouse 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.

YY2 (A-5) is available conjugated to agarose (sc-377008 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377008 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377008 PE), fluorescein (sc-377008 FITC), Alexa Fluor® 488 (sc-377008 AF488), Alexa Fluor® 546 (sc-377008 AF546), Alexa Fluor® 594 (sc-377008 AF594) or Alexa Fluor® 647 (sc-377008 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377008 AF680) or Alexa Fluor® 790 (sc-377008 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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**RESEARCH USE**

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

**APPLICATIONS**

YY2 (A-5) is recommended for detection of YY2 of mouse origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

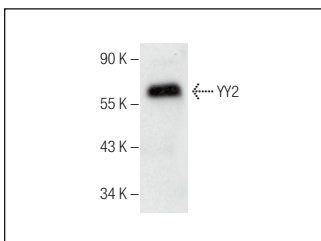
Suitable for use as control antibody for YY2 siRNA (m): sc-155426, YY2 shRNA Plasmid (m): sc-155426-SH and YY2 shRNA (m) Lentiviral Particles: sc-155426-V.

Molecular Weight of YY2: 41 kDa.

Positive Controls: F9 cell lysate: sc-2245.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

**DATA**

YY2 (A-5): sc-377008. Western blot analysis of YY2 expression in F9 whole cell lysate.

**SELECT PRODUCT CITATIONS**

- Klar, M., et al. 2015. Transcription factor Yin-Yang 2 alters neuronal outgrowth *in vitro*. *Cell Tissue Res.* 362: 453-460.
- Tahmasebi, S., et al. 2016. Control of embryonic stem cell self-renewal and differentiation via coordinated alternative splicing and translation of YY2. *Proc. Natl. Acad. Sci. USA* 113: 12360-12367.
- Li, L., et al. 2020. Biological roles of yin yang 2: its implications in physiological and pathological events. *J. Cell. Mol. Med.* 24: 12886-12899.
- Liu, H.J., et al. 2023. mTORC1 upregulates B7-H3/CD276 to inhibit antitumor T cells and drive tumor immune evasion. *Nat. Commun.* 14: 1214.

**STORAGE**

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