

YY2 (N-18): sc-47637

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 κ 3' enhancer and immunoglobulin heavy-chain μ 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

- 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, Delta), that binds to the immunoglobulin κ 3' enhancer and the immunoglobulin heavy-chain μ E1 site. *Proc. Natl. Acad. Sci. USA* 88: 9804-9808.
- Nguyen, N., et al. 2004. Molecular cloning and functional characterization of the transcription factor YY2. *J. Biol. Chem.* 279: 25927-25934.
- Klar, M., et al. 2005. Enhanceosome formation over the β interferon promoter underlies a remote-control mechanism mediated by YY1 and YY2. *Mol. Cell. Biol.* 25: 10159-10170.
- Luo, C., et al. 2006. Rapid evolution of a recently retroposed transcription factor YY2 in mammalian genomes. *Genomics* 87: 348-355.

CHROMOSOMAL LOCATION

Genetic locus: YY2 (human) mapping to Xp22.12.

SOURCE

YY2 (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of YY2 of human origin.

STORAGE

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

RESEARCH USE

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

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-47637 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-47637 X, 200 μ g/0.1 ml.

APPLICATIONS

YY2 (N-18) is recommended for detection of YY2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 (h): sc-61821, YY2 shRNA Plasmid (h): sc-61821-SH and YY2 shRNA (h) Lentiviral Particles: sc-61821-V.

YY2 (N-18) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of YY2: 41 kDa.

Positive Controls: Caki-1 cell lysate: sc-2224.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

- Chen, L., et al. 2010. Genome-wide analysis of YY2 versus YY1 target genes. *Nucleic Acids Res.* 38: 4011-4026.
- Moseley, S.C., et al. 2012. YY1 associates with the macrosatellite DXZ4 on the inactive X chromosome and binds with CTCF to a hypomethylated form in some male carcinomas. *Nucleic Acids Res.* 40: 1596-1608.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **YY2 (C-10): sc-374455**, our highly recommended monoclonal alternative to YY2 (N-18).