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YY1 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2517C

Product Information

Application	WB, E
Primary Accession	P25490
Other Accession	Q00899
Reactivity	Human, Mouse
Predicted	Rat, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	44713
Antigen Region	268-297

Additional Information

Gene ID	7528
Other Names	Transcriptional repressor protein YY1, Delta transcription factor, INO80 complex subunit S, NF-E1, Yin and yang 1, YY-1, YY1, INO80S
Target/Specificity	This YY1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 268-297 amino acids from the Central region of human YY1.
Dilution	WB~~1:2000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	YY1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	YY1
Synonyms	INO80S
Function	Multifunctional transcription factor that exhibits positive and negative

control on a large number of cellular and viral genes by binding to sites overlapping the transcription start site (PubMed:15329343, PubMed:17721549, PubMed:24326773, PubMed:25787250). Binds to the consensus sequence 5'-CCGCCATNTT-3'; some genes have been shown to contain a longer binding motif allowing enhanced binding; the initial CG dinucleotide can be methylated greatly reducing the binding affinity (PubMed:15329343, PubMed:17721549, PubMed:24326773, PubMed:25787250). The effect on transcription regulation is depending upon the context in which it binds and diverse mechanisms of action include direct activation or repression, indirect activation or repression via cofactor recruitment, or activation or repression by disruption of binding sites or conformational DNA changes (PubMed:15329343, PubMed:17721549, PubMed:24326773, PubMed:25787250). Its activity is regulated by transcription factors and cytoplasmic proteins that have been shown to abrogate or completely inhibit YY1- mediated activation or repression (PubMed:15329343, PubMed:17721549, PubMed:24326773, PubMed:25787250). For example, it acts as a repressor in absence of adenovirus E1A protein but as an activator in its presence (PubMed:1655281). Acts synergistically with the SMAD1 and SMAD4 in bone morphogenetic protein (BMP)-mediated cardiac-specific gene expression (PubMed:15329343). Binds to SMAD binding elements (SBEs) (5'-GTCT/AGAC-3') within BMP response element (BMPRE) of cardiac activating regions (PubMed:15329343). May play an important role in development and differentiation. Proposed to recruit the PRC2/EED-EZH2 complex to target genes that are transcriptional repressed (PubMed:11158321). Involved in DNA repair (PubMed:18026119, PubMed:28575647). In vitro, binds to DNA recombination intermediate structures (Holliday junctions). Plays a role in regulating enhancer activation (PubMed:28575647). Recruits the PR-DUB complex to specific gene-regulatory regions (PubMed:20805357).

Cellular Location Nucleus matrix Note=Associated with the nuclear matrix.

Background

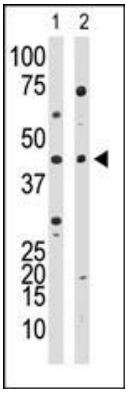
YY1 is a ubiquitously distributed transcription factor belonging to the GLI-Kruppel class of zinc finger proteins. The protein is involved in repressing and activating a diverse number of promoters. YY1 may direct histone deacetylases and histone acetyltransferases to a promoter in order to activate or repress the promoter, thus implicating histone modification in the function of YY1.

References

Sucharov, C.C., et al., J. Biol. Chem. 278(33):31233-31239 (2003).
Kurisaki, K., et al., Mol. Cell. Biol. 23(13):4494-4510 (2003).
Huang, N.E., et al., Biochem. Biophys. Res. Commun. 306(1):267-275 (2003).
Moriuchi, M., et al., J. Biol. Chem. 278(15):13003-13007 (2003).
Hiromura, M., et al., J. Biol. Chem. 278(16):14046-14052 (2003).

Images

Western blot analysis of anti-YY1 Ctr Pab (Cat. #AP2517c) in HL60 cell lysate (lane 1) and in mouse kidney tissue lysate (lane 2). YY1 (arrow) was detected using purified Pab. Secondary HRP-anti-rabbit was used for signal visualization with chemiluminescence.



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