

YY1 Antibody (clone 4D2)
Mouse Monoclonal Antibody
Catalog # ALS14170

Specification

YY1 Antibody (clone 4D2) - Product Information

Application	WB, IHC-P, IF, E
Primary Accession	P25490
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Calculated MW	45kDa KDa
Dilution	WB~~1:1000 IHC-P~~N/A IF~~1:50~200 E~~N/A

YY1 Antibody (clone 4D2) - 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

Human YY1

Reconstitution & Storage

Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles.

Precautions

YY1 Antibody (clone 4D2) is for research use only and not for use in diagnostic or therapeutic procedures.

YY1 Antibody (clone 4D2) - 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](http://www.uniprot.org/citations/15329343), PubMed: [17721549](http://www.uniprot.org/citations/17721549), PubMed: [24326773](http://www.uniprot.org/citations/24326773), PubMed: [25787250](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/15329343), PubMed:[17721549](http://www.uniprot.org/citations/17721549), PubMed:[24326773](http://www.uniprot.org/citations/24326773), PubMed:[25787250](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/15329343), PubMed:[17721549](http://www.uniprot.org/citations/17721549), PubMed:[24326773](http://www.uniprot.org/citations/24326773), PubMed:[25787250](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/15329343), PubMed:[17721549](http://www.uniprot.org/citations/17721549), PubMed:[24326773](http://www.uniprot.org/citations/24326773), PubMed:[25787250](http://www.uniprot.org/citations/25787250)). For example, it acts as a repressor in absence of adenovirus E1A protein but as an activator in its presence (PubMed:[1655281](http://www.uniprot.org/citations/1655281)). Acts synergistically with the SMAD1 and SMAD4 in bone morphogenetic protein (BMP)-mediated cardiac-specific gene expression (PubMed:[15329343](http://www.uniprot.org/citations/15329343)). Binds to SMAD binding elements (SBEs) (5'-GTCT/AGAC-3') within BMP response element (BMPRE) of cardiac activating regions (PubMed:[15329343](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/11158321)). Involved in DNA repair (PubMed:[18026119](http://www.uniprot.org/citations/18026119), PubMed:[28575647](http://www.uniprot.org/citations/28575647)). In vitro, binds to DNA recombination intermediate structures (Holliday junctions). Plays a role in regulating enhancer activation (PubMed:[28575647](http://www.uniprot.org/citations/28575647)). Recruits the PR-DUB complex to specific gene-regulatory regions (PubMed:[20805357](http://www.uniprot.org/citations/20805357)).

Cellular Location

Nucleus matrix Note=Associated with the nuclear matrix.

Volume

50 µl

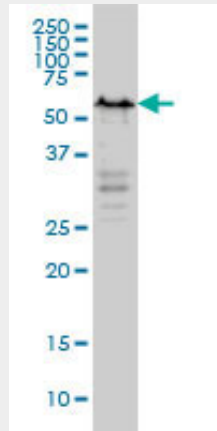
YY1 Antibody (clone 4D2) - Protocols

Provided below are standard protocols that you may find useful for product applications.

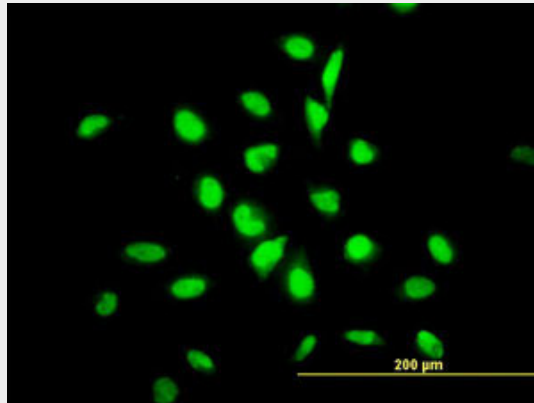
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)

- [Cell Culture](#)

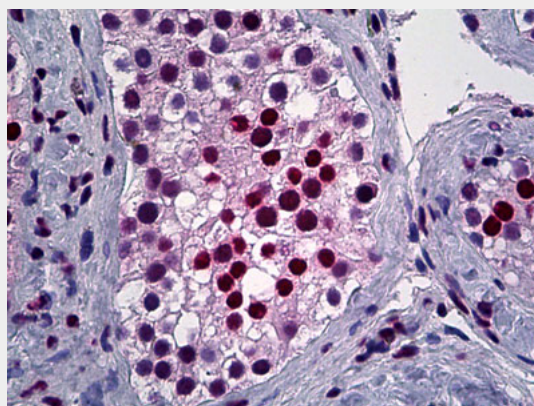
YY1 Antibody (clone 4D2) - Images



YY1 monoclonal antibody clone 4D2 Western blot of YY1 expression in HeLa NE.



Immunofluorescence of monoclonal antibody to YY1 on HeLa cell. [antibody concentration 10 ug/ml]



Anti-YY1 antibody IHC of human, testis.

YY1 Antibody (clone 4D2) - Background

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. 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. 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. Its activity is regulated by transcription factors and cytoplasmic proteins that have been shown to abrogate or completely inhibit YY1-mediated activation or repression. For example, it acts as a repressor in absence of adenovirus E1A protein but as an activator in its presence. 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. May play an important role in development and differentiation. Proposed to recruit the PRC2/EED-EZH2 complex to target genes that are transcriptional repressed. Involved in DNA repair. In vitro, binds to DNA recombination intermediate structures (Holliday junctions).

YY1 Antibody (clone 4D2) - References

- Shi Y.,et al.Cell 67:377-388(1991).
Park K.,et al.Proc. Natl. Acad. Sci. U.S.A. 88:9804-9808(1991).
Whitson R.H.,et al.Submitted (JUL-1992) to the EMBL/GenBank/DDBJ databases.
McNeil S.,et al.J. Cell. Biochem. 68:500-510(1998).
Kalenik J.L.,et al.Nucleic Acids Res. 25:843-849(1997).