



YY1 Recombinant Monoclonal Antibody

Product Code	CSB-RA026297A0HU
Abbreviation	Transcriptional repressor protein YY1
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P25490
Immunogen	A synthesized peptide derived from human YY1
Species Reactivity	Human
Tested Applications	ELISA
Relevance	<p>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). Plays a role in regulating enhancer activation (PubMed:28575647).</p>
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Alias	Transcriptional repressor protein YY1, Delta transcription factor, INO80 complex subunit S, NF-E1, Yin and yang 1, YY-1, YY1, INO80S
Immunogen Species	Homo sapiens (Human)



Research Area	Epigenetics and Nuclear Signaling
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Gene Names	YY1
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Clone No.	3A11
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Description	
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The production of the YY1 recombinant monoclonal antibody involves the application of DNA recombinant technology and in vitro genetic manipulation. Firstly, animals are immunized with a synthesized peptide derived from human YY1, leading to the isolation and selection of positive B cells. Subsequently, the identified positive B cells undergo single clone identification to ensure their specificity. The light and heavy chains of the YY1 antibody are then amplified through PCR and inserted into a plasmid vector. This recombinant vector is introduced into a host cell line, allowing for the expression of the antibody. The YY1 recombinant monoclonal antibody is purified from the cell culture supernatant utilizing affinity chromatography. It exhibits strong binding to human YY1 protein and is well-suited for ELISA.

The YY1 protein is a transcription factor that can bind to DNA and regulate the expression of genes involved in various cellular processes, such as cell proliferation, differentiation, and apoptosis. YY1 can also function as a repressor, depending on the specific context and interacting partners. One of the main functions of YY1 is to regulate the balance between cell proliferation and cell death. YY1 also plays a role in DNA damage response by regulating the expression of genes involved in cell cycle checkpoint control and DNA repair. In addition, YY1 is involved in the regulation of immune responses, inflammation, and metabolism.