

DR1 protein Rabbit pAb

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Catalog # AP59124

Product Information

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	Q01658
Predicted	Human, Mouse, Rat, Chicken, Dog, Pig, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	19444
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human DR1 protein
Epitope Specificity	51-150/176
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Nucleus.
SIMILARITY	Belongs to the NC2 beta/DR1 family. Contains 1 histone-fold domain.
SUBUNIT	Heterodimer with DRAP1. DR1 exists in solution as a homotetramer that dissociates during interaction with TBP and then, after complexing with TBP, reassociates at a slow rate, to reconstitute the tetramer. Interacts with NFIL3. Component of the ADA2A-containing complex (ATAC), composed of CSRP2BP, KAT2A, TADA2L, TADA3L, ZZ3, MBIP, WDR5, YEATS2, CCDC101 and DR1.
Post-translational modifications	Phosphorylation regulates its interaction with TBP. Not phosphorylated when bound to DRAP1.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	DR1, also known as NC2 β (negative cofactor 2 subunit β), is a TFIID (TATA box-binding protein)-associated protein. DR1 localizes to the nucleus and contains an N-terminal histone fold motif, a TFIID-binding domain and an alanine and glutamine rich region. Via its histone fold motif, DR1 forms a heterodimer with NC2 α (DRAP1) to comprise the conserved eukaryotic complex, NC2 (negative cofactor 2). The NC2 complex can both positively and negatively regulate transcription by RNA Pol II. More specifically, NC2 acts as a repressor of TATA-dependent transcription and acts as an activator for DPE-dependent transcription. NC2 represses RNA Pol II transcription by binding to TFIID and inhibiting association of the transcription factors TFIIA and TFIIB. NC2 activity is regulated by phosphorylation. Both subunits, NC2 α and DR1, are phosphorylated in vivo.

Additional Information

Gene ID	1810
Other Names	Protein Dr1, Down-regulator of transcription 1, Negative cofactor 2-beta,

NC2-beta, TATA-binding protein-associated phosphoprotein, DR1

Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	DR1
Function	The association of the DR1/DRAP1 heterodimer with TBP results in a functional repression of both activated and basal transcription of class II genes. This interaction precludes the formation of a transcription-competent complex by inhibiting the association of TFIIA and/or TFIIB with TBP. Can bind to DNA on its own. Component of the ATAC complex, a complex with histone acetyltransferase activity on histones H3 and H4.
Cellular Location	Nucleus.

Background

DR1, also known as NC2 β (negative cofactor 2 subunit β), is a TFIID (TATA box-binding protein)-associated protein. DR1 localizes to the nucleus and contains an N-terminal histone fold motif, a TFIID-binding domain and an alanine and glutamine rich region. Via its histone fold motif, DR1 forms a heterodimer with NC2 α (DRAP1) to comprise the conserved eukaryotic complex, NC2 (negative cofactor 2). The NC2 complex can both positively and negatively regulate transcription by RNA Pol II. More specifically, NC2 acts as a repressor of TATA-dependent transcription and acts as an activator for DPE-dependent transcription. NC2 represses RNA Pol II transcription by binding to TFIID and inhibiting association of the transcription factors TFIIA and TFIIB. NC2 activity is regulated by phosphorylation. Both subunits, NC2 α and DR1, are phosphorylated in vivo.

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