

**#6447** Store at -20°C

## DR1 Antibody


**Cell Signaling**  
TECHNOLOGY®

**Orders:** 877-616-CELL (2355)  
orders@cellsignal.com

**Support:** 877-678-TECH (8324)

**Web:** info@cellsignal.com  
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

**For Research Use Only. Not for Use in Diagnostic Procedures.**

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB, IP	H M R Mk	Endogenous	19	Rabbit	#Q01658	1810

### Product Usage Information

#### Application

Western Blotting  
Immunoprecipitation

#### Dilution

1:1000  
1:50

### Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

### Specificity / Sensitivity

DR1 Antibody recognizes endogenous levels of total DR1 protein.

### Species predicted to react based on 100% sequence homology:

D. melanogaster, Zebrafish, Dog, Pig

### Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly112 of human DR1 protein. Antibodies are purified by protein A and peptide affinity chromatography.

### Background

Down-regulator of transcription 1 (DR1), also known as negative cofactor 2-β (NC2-β), forms a heterodimer with DR1 associated protein 1 (DRAP1)/NC2-α and acts as a negative regulator of RNA polymerase II and III (RNAPII and III) transcription (1-5). DR1 activity is thought to be important for modulating the switch between basal transcription activity and transcription activator driven transcription (2,6,7). DR1 interaction with TATA binding protein (TBP) blocks the association of general transcription factors TFIIA and TFIIB with TBP and disrupts the formation of the RNAPII transcription initiation complex (1,8,9). RNAPIII driven transcription is also inhibited by DR1 interaction with TBP. DR1 disrupts the interaction of TBP with the TFIIB related factor (BRF)/RNAPIII B-related factor, inhibiting transcription initiation by the RNAPIII machinery (4).

### Background References

1. Inostroza, J.A. et al. (1992) *Cell* 70, 477-89.
2. Meisterernst, M. and Roeder, R.G. (1991) *Cell* 67, 557-67.
3. Mermelstein, F. et al. (1996) *Genes Dev* 10, 1033-48.
4. White, R.J. et al. (1994) *Science* 266, 448-50.
5. Kantidakis, T. and White, R.J. (2010) *Nucleic Acids Res* 38, 1228-39.
6. Kraus, V.B. et al. (1994) *Proc Natl Acad Sci U S A* 91, 6279-82.
7. Yeung, K.C. et al. (1994) *Genes Dev* 8, 2097-109.
8. Kim, T.K. et al. (1995) *J Biol Chem* 270, 10976-81.
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### Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

### Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

### Applications Key

**WB:** Western Blotting **IP:** Immunoprecipitation

### Cross-Reactivity Key

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster  
**X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse  
**GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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