HIRA (D6O8L) Rabbit mAb

#12463 Store at -20°C

☑ 100 µl
(10 western blots)

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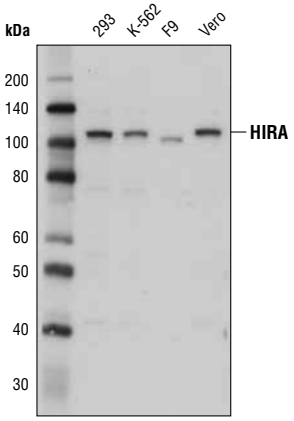
Entrez-Gene ID #7290
Swiss-Prot Acc. #P54198

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP Endogenous	H, M, R, Mk	112 kDa	Rabbit IgG**

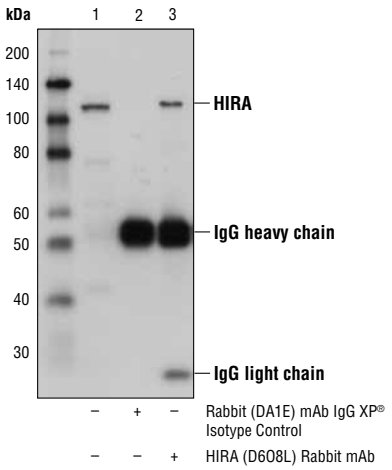
Background: Histone cell cycle regulation defective homolog A (HIRA), also known as TUP1-like enhancer of split protein 1 (TUPLE1), is the mammalian homolog of the yeast HIR1 and HIR2 transcriptional repressor proteins (1). HIRA interacts with UBN1, CABIN, and ASF1A in the cell nucleus to form the evolutionarily conserved HUCA histone chaperone complex that deposits the variant histone H3.3 into chromatin in a DNA-replication independent manner (2). HIRA is required for deposition of histone H3.3 at the transcription start sites of genes, where incorporation of histone H3.3 facilitates nucleosome destabilization and contributes to transcriptional activation (3-5). Histone H3.3 is also linked to gene silencing and is incorporated into regions of the genome thought to be transcriptionally inactive (5-7). While some incorporation of H3.3 into heterochromatin is facilitated by an additional histone chaperone complex containing ATRX and DAXX (ie. telomeric incorporation of H3.3), HIRA is required for incorporation of histone H3.3 and formation of senescence-associated heterochromatin foci (SAHF) during cellular senescence (5-8). HIRA is ubiquitously expressed during mouse embryonic development (9). In the adult mouse, HIRA is expressed at high levels in the kidney, skeletal muscle, and pancreas, but it is expressed at lower levels in the heart, lung, placenta, brain, and liver (9). A missing copy of the HIRA gene on human chromosome region 22q11.2 is a common characteristic of DiGeorge syndrome patients and insufficient production of the HIRA protein may disrupt normal embryonic development (9).

Specificity/Sensitivity: HIRA (D6O8L) Rabbit mAb recognizes endogenous levels of total HIRA protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a recombinant protein specific to the carboxy terminus of human HIRA protein.



Western blot analysis of extracts from various cell lines using HIRA (D6O8L) Rabbit mAb.



Immunoprecipitation of HIRA from K-562 cell extracts, using Rabbit (DA1E) mAb IgG XP® Isotype Control #3900 (lane 2) or HIRA (D6O8L) Rabbit mAb (lane 3). Lane 1 is 10% input. Western blot analysis was performed using HIRA (D6O8L) Rabbit mAb.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. *Do not aliquot the antibody.*

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:50

For product specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended complementary products.

Background References:

(1) Lamour, V. et al. (1995) *Hum Mol Genet* 4, 791-9.
(2) Rai, T.S. et al. (2011) *Mol Cell Biol* 31, 4107-18.
(3) Jin, C. et al. (2009) *Nat Genet* 41, 941-5.
(4) Jin, C. and Felsenfeld, G. (2007) *Genes Dev* 21, 1519-29.
(5) Goldberg, A.D. et al. (2010) *Cell* 140, 678-91.
(6) Wong, L.H. et al. (2010) *Genome Res* 20, 351-60.
(7) Wong, L.H. et al. (2009) *Genome Res* 19, 404-14.
(8) Zhang, R. et al. (2007) *Mol Cell Biol* 27, 2343-58.
(9) Wilming, L.G. et al. (1997) *Hum Mol Genet* 6, 247-58.

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

Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide
Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **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 **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.