HIRA Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	HIRA, Polyclonal Antibody
Full Product Name	HIRA, NT (HIRA, DGCR1, HIR, TUPLE1, Protein HIRA, TUP1-like enhancer of split protein 1) (MaxLight 650)
Product Gene Name	anti-HIRA antibody
Product Synonym Names	HIRA; DGCR1; HIR; TUPLE1; Protein HIRA; TUP1-like enhancer of split protein 1
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with MaxLight650.
Purity/Purification	Purified by Protein A Affinity Chromatography.
Preparation and Storage	Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Caution: MaxLight650 conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Molecular Weight	111,835 Da
Chromosome Location	Chromosome: 22; NC_000022.10 (19318224..19419219, complement). Location: 22q11.21
OMIM	600237
3D Structure	ModBase 3D Structure for P54198
Immunogen	HIRA antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 31-61 amino acids from the N-terminal region of human HIRA.
Conjugate	MaxLight650
Note	Preservative Free
Product Categories/Family for anti-HIRA antibody	Antibodies; Disease Markers
Applications Tested/Suitable for anti-HIRA antibody	Western Blot (WB), FLISA
Application Notes for anti-HIRA antibody	WB: 1:100-500 FLISA: 1:1,000 Applications are based on unconjugated antibody.
Related Product Information for anti-HIRA antibody	This gene encodes a histone chaperone that preferentially places the variant histone H3.3 in nucleosomes. Orthologs of this gene in yeast, flies, and plants are necessary for the formation of transcriptionally silent heterochomatin. This gene plays an important role in the formation of the senescence-associated heterochromatin foci. These foci likely mediate the irreversible cell cycle changes that occur in senescent cells. It is considered the primary candidate gene in some haploinsufficiency syndromes such as DiGeorge syndrome, and insufficient production of the gene may disrupt normal embryonic development.
Product References and Citations for anti-HIRA antibody	Bailey, S.D., et al. Diabetes Care (2010). In press: Talmud, P.J., et al. Am. J. Hum. Genet. 85(5):628-642(2009). Banumathy, G., et al. Mol. Cell. Biol. 29(3):758-770(2009). Ramelli, G.P., et al. Dev Med Child Neurol 50(12):953-955(2008). Zhang, R., et al. Mol. Cell. Biol. 27(6):2343-2358(2007).

Other Notes	Small volumes of anti-HIRA antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for HIRA purchase	MBS6306612 is an antibody targeting HIRA. Also known as HIRA, NT (HIRA, DGCR1, HIR, TUPLE1, Protein HIRA, TUP1-like enhancer of split protein 1) (MaxLight 650). Reactive in Human. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for HIRA. It may not necessarily be applicable to this product.

NCBI GI #	21536485
NCBI GeneID	7290
NCBI Accession #	NP_003316.3
UniProt Primary Accession #	P54198
UniProt Secondary Accession #	Q05BU9; Q8IXN2
UniProt Related Accession #	P54198
GenBank Nucleotide #	NM_003325.3
NCBI Official Full Name	protein HIRA
NCBI Official Synonym Full Names	histone cell cycle regulator
NCBI Official Symbol	HIRA
NCBI Official Synonym Symbols	TUP1; DGCR1; TUPLE1
UniProt Protein Name	Protein HIRA
UniProt Synonym Protein Names	TUP1-like enhancer of split protein 1
Protein Family	Protein
UniProt Gene Name	HIRA
UniProt Synonym Gene Names	DGCR1; HIR; TUPLE1
UniProt Entry Name	HIRA_HUMAN
NCBI Protein Information	protein HIRA; DiGeorge critical region gene 1; TUP1-like enhancer of split protein 1; HIR histone cell cycle regulation defective homolog A

UniProt Comments for HIRA	HIRA: a histone chaperone. Necessary to mediate DNA-synthesis-independent nucleosome assembly. 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. 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. Histone H3.3 is also linked to gene silencing and is incorporated into regions of the genome thought to be transcriptionally inactive. 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. HIRA is ubiquitously expressed during mouse embryonic development. 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. 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. Two isoforms of the human protein result from alternative splicing. Protein type: Cell development/differentiation; Transcription regulation; Cell cycle regulation Chromosomal Location of Human Ortholog: 22q11.21 Cellular Component: nucleoplasm; PML body; protein complex; nuclear chromatin; nucleus Molecular Function: protein binding; chromatin binding; transcription corepressor activity; transcription factor activity Biological Process: osteoblast differentiation; regulation of transcription from RNA polymerase II promoter; anatomical structure morphogenesis; muscle cell differentiation; transcription, DNA-dependent; DNA replication-independent nucleosome assembly; gastrulation; chromatin modification
Research Articles on HIRA	**1.** NHRD domain of UBN1 as being an essential region for HIRA interaction and chromatin organization by the HUCA complex
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