10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

DICER1 Rabbit pAb

Catalog # AP99651

Product Information

Primary Accession	Q9UPY3
Other Accession	Q9UPY3
Reactivity	Human
Predicted	Rat, Pig, Mouse, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	218682
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human DICER1/Dicer
Epitope Specificity	1301-1400/1922
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the helicase family. Dicer subfamily. Contains 1 Dicer dsRNA-binding fold domain. Contains 1 DRBM (double-stranded RNA-binding) domain. Contains 1 helicase ATP-binding domain. Contains 1 helicase C-terminal domain. Contains 1 PAZ domain. Contains 2 RNase III domains
SUBUNIT	Component of the RISC loading complex (RLC), or micro-RNA (miRNA) loading complex (miRLC), which is composed of DICER1, EIF2C2/AGO2 and TARBP2. Note that the trimeric RLC/miRLC is also referred to as RISC. Interacts with DHX9, EIF2C1, PIWIL1 and PRKRA. Associates with the 60S ribosome.
DISEASE	Defects in DICER1 are a cause of pleuropulmonary blastoma (PPB) [MIM:601200]. PPB is a rare pediatric tumor of the lung that arises during fetal lung development and is often part of an inherited cancer syndrome. PPBs contain both epithelial and mesenchymal cells. Early in tumorigenesis, cysts form in lung airspaces, and these cysts are lined with benign-appearing epithelium. Mesenchymal cells susceptible to malignant transformation reside within the cyst walls and form a dense 'cambium' layer beneath the epithelial lining. In a subset of patients, overgrowth of the mesenchymal cells produces a sarcoma, a transition that is associated with a poorer prognosis.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	This gene encodes a protein possessing an RNA helicase motif containing a DEXH box in its amino terminus and an RNA motif in the carboxy terminus. The encoded protein functions as a ribonuclease and is required by the RNA interference and small temporal RNA (stRNA) pathways to produce the active small RNA component that represses gene expression. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Sep 2010]

Additional Information

Gene ID	23405

Other Names	Dicer; DCR1; Dicer1e; GLOW; HERNA; K12H4.8-LIKE; MNG1; RMSE2; aviD; 1110006F08Rik; D12Ertd7e; mKIAA0928; DICER_BOVIN; DICER1; 3.1.26.3; DICER_HUMAN; Helicase with RNase motif (Helicase MOI); KIAA0928; DICER_MOUSE; Double-strand-specific ribonuclease mDCR-1; Mdcr; dicer 1, ribonuclease III; Dicer1, Dcr-1 homolog (Drosophila); multinodular goitre 1; dicer 1, ribonuclease type III; dicer 1, double-stranded RNA-specific endoribonuclease
Dilution	ICC/IF=1:50-200
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	DICER1
Synonyms	DICER, HERNA, KIAA0928
Function	Double-stranded RNA (dsRNA) endoribonuclease playing a central role in short dsRNA-mediated post-transcriptional gene silencing. Cleaves naturally occurring long dsRNAs and short hairpin pre-microRNAs (miRNA) into fragments of twenty-one to twenty-three nucleotides with 3' overhang of two nucleotides, producing respectively short interfering RNAs (siRNA) and mature microRNAs. SiRNAs and miRNAs serve as guide to direct the RNA-induced silencing complex (RISC) to complementary RNAs to degrade them or prevent their translation. Gene silencing mediated by siRNAs, also called RNA interference, controls the elimination of transcripts from mobile and repetitive DNA elements of the genome but also the degradation of exogenous RNA of viral origin for instance. The miRNA pathway on the other side is a mean to specifically regulate the expression of target genes.
Cellular Location	Cytoplasm. Cytoplasm, perinuclear region

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