

DGCR8 / Pasha Antibody (internal region)
Peptide-affinity purified goat antibody
Catalog # AF2905a

Specification

DGCR8 / Pasha Antibody (internal region) - Product Information

Application	E
Primary Accession	O8WY05
Other Accession	NP_073557.3 , 54487 , 94223 (mouse) , 287954 (rat)
Predicted Host	Human, Mouse, Rat
Clonality	Goat
Concentration	Polyclonal
Isotype	0.5 mg/ml
Calculated MW	IgG
	86045

DGCR8 / Pasha Antibody (internal region) - Additional Information

Gene ID 54487

Other Names

Microprocessor complex subunit DGCR8, DiGeorge syndrome critical region 8, DGCR8, C22orf12, DGCRK6

Format

0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

DGCR8 / Pasha Antibody (internal region) is for research use only and not for use in diagnostic or therapeutic procedures.

DGCR8 / Pasha Antibody (internal region) - Protein Information

Name DGCR8

Synonyms C22orf12, DGCRK6

Function

Component of the microprocessor complex that acts as a RNA- and heme-binding protein that is involved in the initial step of microRNA (miRNA) biogenesis. Component of the microprocessor complex that is required to process primary miRNA transcripts (pri-miRNAs) to release precursor miRNA (pre-miRNA) in the nucleus. Within the microprocessor complex, DGCR8 function as a

molecular anchor necessary for the recognition of pri-miRNA at dsRNA-ssRNA junction and directs DROSHA to cleave 11 bp away from the junction to release hairpin-shaped pre-miRNAs that are subsequently cut by the cytoplasmic DICER to generate mature miRNAs (PubMed:26027739, PubMed:26748718). The heme-bound DGCR8 dimer binds pri-miRNAs as a cooperative trimer (of dimers) and is active in triggering pri-miRNA cleavage, whereas the heme-free DGCR8 monomer binds pri-miRNAs as a dimer and is much less active. Both double-stranded and single-stranded regions of a pri-miRNA are required for its binding (PubMed:15531877, PubMed:15574589, PubMed:15589161, PubMed:16751099, PubMed:16906129, PubMed:16963499, PubMed:17159994). Specifically recognizes and binds N6-methyladenosine (m6A)-containing pri-miRNAs, a modification required for pri-miRNAs processing (PubMed:25799998). Involved in the silencing of embryonic stem cell self-renewal (By similarity). Also plays a role in DNA repair by promoting the recruitment of RNF168 to RNF8 and MDC1 at DNA double-strand breaks and subsequently the clearance of DNA breaks (PubMed:34188037).

Cellular Location

Nucleus. Nucleus, nucleolus. Note=Colocalizes with nucleolin and DROSHA in the nucleolus. Mostly detected in the nucleolus as electron-dense granular patches around the fibrillar center (FC) and granular component (GC). Also detected in the nucleoplasm as small foci adjacent to splicing speckles near the chromatin structure. Localized with DROSHA in GW bodies (GWBs), also known as P-bodies (PubMed:17159994)

Tissue Location

Ubiquitously expressed.

DGCR8 / Pasha Antibody (internal region) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

DGCR8 / Pasha Antibody (internal region) - Images

DGCR8 / Pasha Antibody (internal region) - References

Altered brain microRNA biogenesis contributes to phenotypic deficits in a 22q11-deletion mouse model. Stark KL, Xu B, Bagchi A, Lai WS, Liu H, Hsu R, Wan X, Pavlidis P, Mills AA, Karayiorgou M, Gogos JA. Nat. Genet. 2008 Jun 40 (6): 751-60. PMID: 18469815