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DGCR8 Antibody (Center)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8933c

Specification

DGCR8 Antibody (Center) - Product Information

Application	**FC, WB,E**
Primary Accession	Q8WYQ5
Other Accession	Q9EQM6, A6QR44
Reactivity	**Human**
Predicted	**Bovine, Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**86045**
Antigen Region	**439-466**

DGCR8 Antibody (Center) - Additional Information

Gene ID 54487

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

Target/Specificity
This DGCR8 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 439-466 amino acids from the Central region of human DGCR8.

Dilution
FC~~1:10~50
WB~~1:1000
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

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

Precautions
DGCR8 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

DGCR8 Antibody (Center) - Protein Information

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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 form 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 Antibody (Center) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

DGCR8 Antibody (Center) - Images

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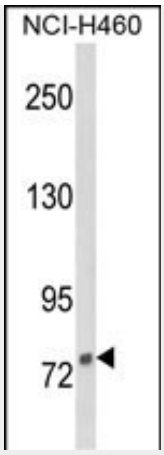
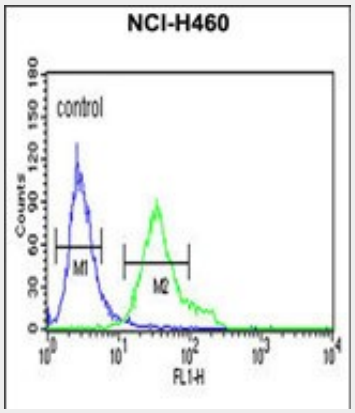


Western blot analysis of DGCR8 Antibody (Center) (Cat. #AP8933c) in NCI-H460 cell line lysates (35ug/lane). DGCR8 (arrow) was detected using the purified Pab.



DGCR8 Antibody (Center) (Cat. #AP8933c) flow cytometric analysis of NCI-H460 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

DGCR8 Antibody (Center) - Background

MicroRNAs (miRNA) are a recently discovered family of short non-protein-coding RNAs that negatively regulate gene expression. Recent studies of miRNAs highlight a requirement for cell viability. Post-transcriptional silencing of target genes by miRNAs occurs either by targeting specific cleavage of homologous mRNAs, or by targeting specific inhibition of protein synthesis.

DGCR8 Antibody (Center) - References

Clague,J., et.al., Mol. Carcinog. 49 (2), 183-189 (2010)
Shenoy,A. et.al., PLoS ONE 4 (9), E6971 (2009)