

**KD-Validated Anti-DGCR8 Rabbit Monoclonal Antibody**  
**Rabbit monoclonal antibody**  
**Catalog # AGI1595****Specification****KD-Validated Anti-DGCR8 Rabbit Monoclonal Antibody - Product Information**

Application	WB, ICC
Primary Accession	<a href="#">Q8WYQ5</a>
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Rabbit IgG
Calculated MW	Predicted, 86 kDa , observed, 110 kDa kDa
Gene Name	DGCR8
Aliases	DGCR8; DGCR8 Microprocessor Complex Subunit; DGCRK6; DiGeorge Syndrome Critical Region Gene 8; Microprocessor Complex Subunit DGCR8; DiGeorge Syndrome Critical Region 8; C22orf12; Pasha; Gy1; DGCR8, Microprocessor Complex Subunit; Chromosome 22 Open Reading Frame 12; C22ORF12; PASHA; GY1 A synthesized peptide derived from human DGCR8
Immunogen	

**KD-Validated Anti-DGCR8 Rabbit Monoclonal Antibody - Additional Information**

Gene ID	54487
<b>Other Names</b>	
Microprocessor complex subunit DGCR8, DiGeorge syndrome critical region 8, DGCR8, C22orf12, DGCRK6	

**KD-Validated Anti-DGCR8 Rabbit Monoclonal Antibody - 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:<a href="http://www.uniprot.org/citations/26027739" target="\_blank">26027739</a>, PubMed:<a href="http://www.uniprot.org/citations/26748718" target="\_blank">26748718</a>). 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:<a href="http://www.uniprot.org/citations/15531877" target="\_blank">15531877</a>, PubMed:<a href="http://www.uniprot.org/citations/15574589" target="\_blank">15574589</a>, PubMed:<a href="http://www.uniprot.org/citations/15589161" target="\_blank">15589161</a>, PubMed:<a href="http://www.uniprot.org/citations/16751099" target="\_blank">16751099</a>, PubMed:<a href="http://www.uniprot.org/citations/16906129" target="\_blank">16906129</a>, PubMed:<a href="http://www.uniprot.org/citations/16963499" target="\_blank">16963499</a>, PubMed:<a href="http://www.uniprot.org/citations/17159994" target="\_blank">17159994</a>). Specifically recognizes and binds N6-methyladenosine (m6A)-containing pri-miRNAs, a modification required for pri-miRNAs processing (PubMed:<a href="http://www.uniprot.org/citations/25799998" target="\_blank">25799998</a>). 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:<a href="http://www.uniprot.org/citations/34188037" target="\_blank">34188037</a>).

#### 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

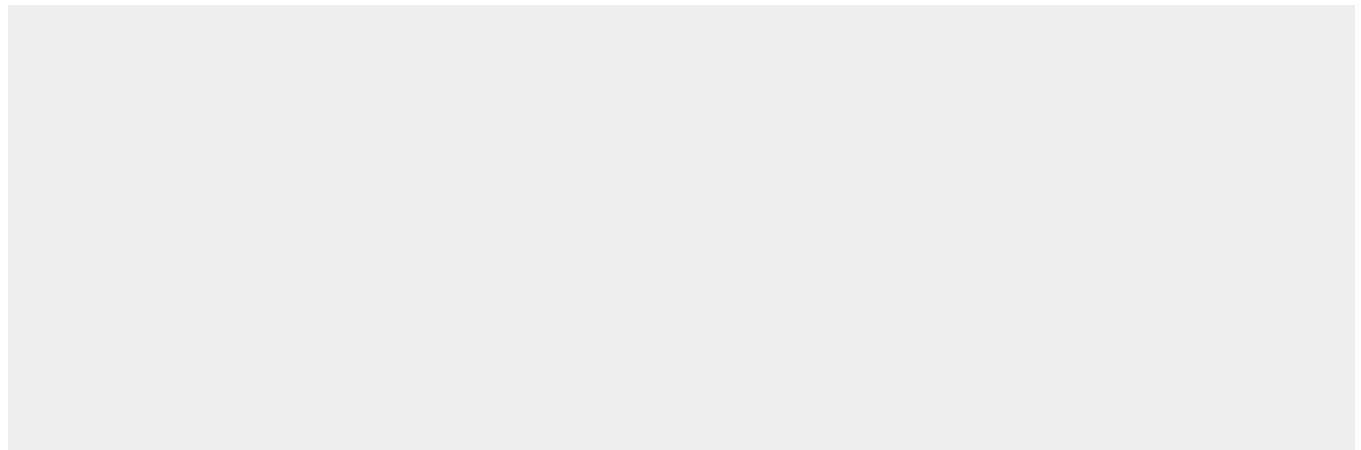
Ubiquitously expressed.

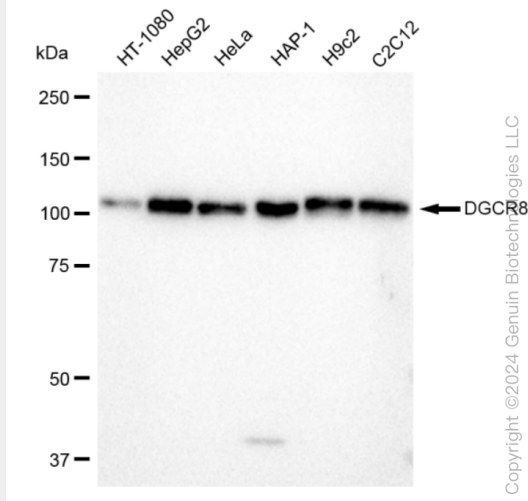
### KD-Validated Anti-DGCR8 Rabbit Monoclonal Antibody - Protocols

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

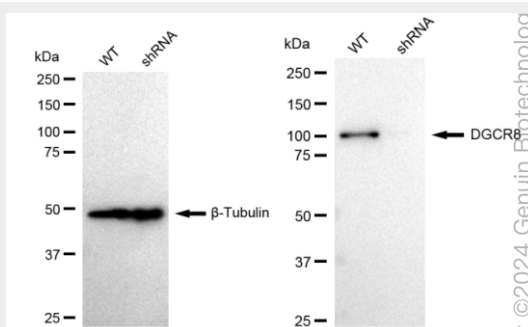
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### KD-Validated Anti-DGCR8 Rabbit Monoclonal Antibody - Images

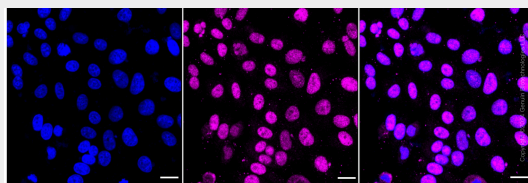




Western blotting analysis using anti-DGCR8 antibody (Cat#AGI1595). Total cell lysates (30  $\mu$ g) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-DGCR8 antibody (Cat#AGI1595, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-DGCR8 antibody (Cat#AGI1595). DGCR8 expression in wild type (WT) and DGCR8 shRNA knockdown (KD) HeLa cells with 30  $\mu$ g of total cell lysates.  $\beta$ -Tubulin serves as a loading control. The blot was incubated with anti-DGCR8 antibody (Cat#AGI1595, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Immunocytochemical staining of HepG2 cells with anti-DGCR8 antibody (Cat#AGI1595, 1:1,000). Nuclei were stained blue with DAPI; DGCR8 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20  $\mu$ m.