

DGCR8 Antibody (Center) Blocking Peptide
Synthetic peptide
Catalog # BP8933c**Specification**

DGCR8 Antibody (Center) Blocking Peptide - Product InformationPrimary Accession [Q8WYQ5](#)**DGCR8 Antibody (Center) Blocking Peptide - Additional Information****Gene ID** 54487**Other Names**

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

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP8933c](/products/AP8933c) was selected from the Center region of human DGCR8. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

DGCR8 Antibody (Center) Blocking Peptide - 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](http://www.uniprot.org/citations/26027739), PubMed: [26748718](http://www.uniprot.org/citations/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) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

DGCR8 Antibody (Center) Blocking Peptide - Images

DGCR8 Antibody (Center) Blocking Peptide - 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) Blocking Peptide - References

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