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Product Information

Anti-DGCR8 (N-terminal)
produced in rabbit, affinity isolated antibody

Product Number **SAB4200089**

Product Description

Anti-DGCR8 (N-terminal) is produced in rabbit using as the immunogen a synthetic peptide corresponding a sequence at the N-terminal of human DGCR8 (Gene ID: 54487) conjugated to KLH. The corresponding sequence differs by two amino acids in mouse. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-DGCR8 (N-terminal) recognizes human DGCR8. The antibody may be used in several immunochemical techniques including immunoblotting, immuno-precipitation, and immunofluorescence (~100 kDa). Detection of the DGCR8 band by immunoblotting is specifically inhibited with the immunizing peptide.

DGCR8, also known as DiGeorge syndrome critical region 8, DGCRK8, and Pasha, was first identified in humans as a protein encoded by a gene normally located on chromosome 22q11 that is deleted in patients suffering from a rare congenital disease known as DiGeorge syndrome.[1] DGCR8 is the cofactor that interacts with Drosha and forms a functional complex called the ‘‘Microprocessor” which is essential for microRNA (miRNA) maturation.[2-4]

MicroRNAs are 22 nucleotide small noncoding RNAs that control gene expression at the post-transcriptional level through translational inhibition and destabilization of their target mRNAs. DGCR8 contains an N-terminal region which is critical for nuclear localization, a WW domain in its middle region and two dsRBDs at the C-terminus which can directly and stably interact with the pri-miRNAs.[5] It has been shown that DGCR8 is essential for miRNA biogenesis and silencing of embryonic stem cell self-renewal.[6]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody concentration: ~1.0 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store at –20 °C. For continuous use, the product may be stored at 2–8 °C for up to one month. For extended storage, freeze in working aliquots at –20 °C. Repeated freezing and thawing, or storage in “frost-free” freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify by centrifugation. Discard working dilutions if not used within 12 hours.

Product Profile

Immunoblotting: a working antibody concentration of 1-2 μg/mL is recommended using lysates of HEK-293T cells overexpressing human DGCR8.

Immunoprecipitation: a working antibody amount of 2.5-5 μg is recommended using lysates of HEK-293T cells overexpressing human DGCR8.

Immunofluorescence: a working antibody concentration of 2-5 μg/mL is recommended using paraformaldehyde fixed HEK-293T cells overexpressing human DGCR8.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration

References

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3. Gregory, R.I. et al., *Nature*, **432**, 235–240 (2004).
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5. Yeom, K-H. et al., Nucleic *Acids Res*., **32**, 4622-4629 (2006).
6. Wang, Y. et al., *Nat. Genet*., **39**, 380-385 (2007).

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