

Product Information

Anti-Drosha

produced in rabbit, affinity isolated antibody

Product Number **SAB4200151**

Product Description

Anti-Drosha is produced in rabbit using as the immunogen a synthetic peptide corresponding to a fragment of human drosha (Gene ID: 29102) 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-Drosha recognizes human drosha. The antibody may be used in several immunochemical techniques including immunoblotting (2-3 isoforms at molecular mass of 130-160 kDa) and immunofluorescence. Detection of the drosha bands by immunoblotting is specifically inhibited by the immunizing peptide.

Drosha (also known as Ribonuclease III, RNase III, RNC, p241), a member of the ribonuclease III superfamily, participates in diverse RNA maturation and decay pathways in eukaryotic and prokaryotic cells.¹ It also plays key roles in microRNA (miRNA) biogenesis, where it cleaves primary miRNAs (pri-miRNAs) to release hairpin-shaped pre-miRNAs that are subsequently cut by the cytoplasmic RNase III Dicer to generate mature miRNAs.² Drosha has two tandem RNase III domains that form an intramolecular dimer that cleave the 3' and 5' strands,³ one double-stranded RNA-binding domain, as well as an extended amino-terminal proline and arginine/serine-rich domains. DGCR8 (also known as Pasha) is the cofactor that interacts with drosha and forms a functional complex called the "Microprocessor". DGCR8 anchors at the ssRNA-dsRNA junction and directs drosha to cleave ~11 bp away from the junction.⁴

Reagent

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

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 the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working antibody concentration of 2-4 µg/mL is recommended using HeLa nuclear cell lysates.

Immunofluorescence: a working antibody concentration of 2.5-5 µg/mL is recommended using paraformaldehyde-fixed HEK-293T cells.

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

References

1. Fortin, K.R., et al., *BMC Genomics*, **3**, 26 (2002).
2. Lee, Y., et al., *Nature*, **425**, 415-419 (2003).
3. Han, J., et al., *Genes Dev.*, **18**, 3016-3027 (2004).
4. Han, J., et al., *Cell*, **125**, 887-901 (2006).

VS,SG,KAA,PHC,MAM 07/19-1