3050 Spruce Street, St. Louis, MO 63103 USA
Tel: (800) 521-8956 (314) 771-5765 Fax: (800) 325-5052 (314) 771-5757
email: techservice@sial.com sigma-aldrich.com

Product Information

Anti-POLR2A antibody, Mouse monoclonal
clone RPOL-1, purified from hybridoma cell culture

Catalog Number **SAB4200586**

Product Description

Anti-POLR2A (mouse IgG1 isotype) is derived from the hybridoma RPOL-1 produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with a synthetic peptide corresponding to the N-terminal region of human POLR2A (GeneID: 5430), conjugated to KLH. The corresponding sequence is identical in mouse, rat, monkey, bovine, dog and pig. The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents, Catalog Number ISO2. The antibody is purified from culture supernatant of hybridoma cells grown in a bioreactor.

Anti-POLR2A recognizes human POLR2A. The antibody can be used in various immunochemical techniques including immunoblotting (~250 kDa). Detection of the POLR2A band by immunoblotting is specifically inhibited by the immunizing peptide.

POLR2A is the largest subunit of RNA polymerase II, the polymerase responsible for the synthesis of messenger RNA in eukaryotes. POLR2A contains a carboxy-terminal domain composed of heptapeptide repeats that are essential for polymerase activity. These repeats contain serine and threonine residues that are phosphorylated in actively transcribing RNA polymerase. In addition, this subunit, in combination with several other polymerase subunits, forms the DNA binding domain of the polymerase, a groove in which the DNA template is transcribed into RNA.[1-4]

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

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze at −20 °C in working aliquots. 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 dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 1-2 μg/mL is recommended using nuclear extracts of human HeLa cells.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.

References

1. Szentirmay, M.N., and Sawadogo, M., *Nucl. Acids Res.*, **28**, 2019-2025 (2000).
2. Greenblatt, J., *Curr. Opin. Cell Biol.*, **9**, 310-319 (1997).
3. Marshall, N.F., et al., *J. Biol. Chem.*, **271**, 27176-27183 (1996).
4. McCracken S., et al., *Nature*, **385**, 357-361 (1997).

RC,ST,RC,PHC 04/21-1