

Product Information

Anti-TIN2 antibody, Mouse monoclonal
clone MT-28, purified from hybridoma cell culture

Catalog Number **SAB4200157**

Product Description

Anti-TIN2 (mouse IgG2b isotype) is derived from the hybridoma MT-28 produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with a synthetic peptide corresponding to amino acids 216-330 of mouse TIN-2 (GeneID: 28113), conjugated to KLH. The corresponding sequence differs by two amino acids in rat. 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-TIN2 recognizes mouse and rat TIN2. The antibody may be used in several immunochemical techniques including immunoblotting (~40 kDa). Detection of the TIN2 band by immunoblotting is specifically inhibited with the immunizing protein.

The telomere is a nucleoprotein complex at the end of linear chromosomes, which is composed of G rich short nucleotide repeats (e.g. TTAGGG repeats for vertebrates) and associated proteins. Human telomeres bind shelterin /telosome, a six-subunit protein complex that protects chromosome ends from DNA damage response and regulates telomere length maintenance by telomerase. The six shelterin subunits include: TRF1, TRF2, TIN2, Rap1, TPP1 and POT1.^{1,2} TIN2 (TRF-1 interacting nuclear factor 2) of the shelterin complex is recruited to the telomere through the TRF homology (TRFH) domain of TRF1 and tethers TPP1/POT1 to TRF1 and TRF2. TIN2 also connects TRF1 to TRF2 and this link contributes to the stabilization of TRF2 on telomeres.³ In addition, TIN2 has also been found to tether the telomeres to the nuclear matrix.⁴ Interestingly, this protein has also been found to be mutated in Dyskeratosis Congenita, a multi-system disorder which in its classical form is characterized by abnormalities of the skin, nails and mucous membranes.⁵

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 Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store at -20 °C. 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 antibody concentration of 0.5-1.0 µg/mL is recommended using L929 cell extracts.

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

References

1. Colgin, L., and Reddel, R., *Curr. Biol.*, **14**, R901-R902 (2005).
2. de Lange, T., *Genes Dev.*, **19**, 2100-2110 (2005).
3. Ye, J.Z.S., et al., *J. Biol. Chem.*, **279**, 47264-47271 (2004).
4. Kaminker, P.G., et al., *Cell Cycle*, **8**, 931-939 (2009).
5. Savage, S.A., et al., *Am. J. Hum. Gen.*, **82**, 501-509 (2008).

RC,GG,KAA,PHC 04/21-1