

## Product Information

**Anti-TIN2 antibody, Mouse monoclonal**  
clone TIN30, purified from hybridoma cell culture

Product Number **SAB4200108**

### Product Description

Monoclonal Anti-TIN2 (mouse IgG1 isotype) is derived from the hybridoma TIN-30 produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with a synthetic peptide corresponding to a fragment of human TIN-2 (GeneID: 26277), conjugated to KLH. The corresponding sequence is identical in monkey, but differs by one amino acid in bovine, pig, and horse. The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents, Product Number ISO2. The antibody is purified from culture supernatant of hybridoma cells grown in a bioreactor.

Monoclonal Anti-TIN2 specifically recognizes only human 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 a six-subunit protein complex called shelterin/telosome that protects chromosome ends from DNA damage response and regulates telomere length maintenance by telomerase. The six shelterin subunits are: TRF1, TRF2, and POT1 which directly recognize the TTAGGG repeats, and TIN2, Rap1, and TPP1.<sup>1,2</sup> One of the shelterin components, TIN2 (TRF-1 interacting nuclear factor 2) 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.<sup>3</sup> In addition, TIN2 has also been found to tether the telomeres to the nuclear matrix.<sup>4</sup> 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.<sup>5</sup>

### 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.

### 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 HeLa cell extract.

**Note:** In order to obtain best results in various techniques and preparations, it is recommended to determine 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).

VS,GG,TD,KAA,PHC,MAM 05/20-1