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-THY1 antibody, Mouse monoclonal
clone: TH350, purified from hybridoma cell culture

Catalog Number **SAB4200497**

Product Description

Anti-THY1 (mouse IgG1 isotype) is derived from the hybridoma TH350 produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with a synthetic peptide corresponding to a sequence at the N-terminus of human THY1 (GeneID 7070), conjugated to KLH. 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-THY1 recognizes human, rat and mouse Thy-1. The product may be used in several immunochemical techniques including immunoblotting (~27 kDa) and flow cytometry. Staining of the THY1 band in immunoblotting is specifically inhibited by the immunizing protein.

Thy-1 (CD90) is a 25–37 kDa cell surface glycoprotein localized on the outer leaflet of cell membranes enriched in lipid raft microdomains. It is expressed on various cell types, including human fibroblasts, neurons, blood stem cells and endothelial cells as well as on murine T cells.[1] It was found to be involved in T cell activation and the other nonimmunologic functions including inhibition of neurite outgrowth, apoptotic signaling, leukocyte and melanoma cell adhesion and migration, as well as fibroblast proliferation and migration.[2,3] These functions suggested that Thy-1 plays a role as a mediator of cell–cell and cell–matrix interactions. In addition, Thy-1 was suggested to act as a tumor suppressor in human ovarian cancer as well as in nasopharyngeal carcinoma.[4-5] Thy-1 is a cell surface marker, which has been used to identify local and circulating liver cancer stem cells.[6] Interestingly, in some types of cancer, Thy-1 expression can be regulated by the epigenetic mechanism of promoter region methylation, in which down-regulation of Thy-1 is associated with a more invasive/metastatic clinical phenotype.[5]

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

Storage/Stability

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 2.0-4.0 μg/mL is recommended using NT2 total cell extracts.

Flow Cytometry: a working concentration of 20-40 μg/test is recommended using A549 cells.

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

References

1. Barda-Saad, M., et al., *Exp. Hematol.,* **27**, 834-833 (1999).
2. Barker, T.H., et al., *Exp. Cell Res.,* **295,** 488-496 (2004).
3. Rege, T.A., and Hagood, J.S., *Biochim. Biophys. Acta,* **1763**, 991-999 (2006).
4. Abeysinghe, H.R., et al., *Cancer Genet. Cytogenet*., **149**, 1-10 (2004).
5. Lung, H.L. et al., *Oncogene* **24**, 6525-6532 (2005).
6. Yang, Z.F., et al., *Cancer Cell,* **13**, 153-166 (2008).

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