SANTA CRUZ BIOTECHNOLOGY, INC.

Thy-1 (OX7): sc-53116

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Over 100 cell surface markers have been identified through the use of monoclonal antibodies. Many of these markers have proven useful in identifying specific subpopulations of cells within mixed colonies. Accordingly, these molecules have been assigned a "cluster of differentiation" (CD) designation. One such marker, designated Thy-1 (also referred to as CDw90), is a phosphatidyl-anchored cell surface glycoprotein which when coexpressed with CD34 on cells from normal human bone marrow, identifies a subpopulation that includes putative hematopoietic, pleuripotent stem cells. $Thy1^+$ cells from bone marrow have been implicated in syngeneic graft versus host disease and may serve to regulate autoreactivity after bone marrow transplant.

CHROMOSOMAL LOCATION

Genetic locus: THY1 (human) mapping to 11q23.3; Thy1 (mouse) mapping to 9 A5.1.

SOURCE

Thy-1 (OX7) is a mouse monoclonal antibody raised against thymocyte Thy-1 antigen of rat origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Thy-1 (OX7) is available conjugated to agarose (sc-53116 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53116 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53116 PE), fluorescein (sc-53116 FITC), Alexa Fluor® 488 (sc-53116 AF488), Alexa Fluor® 546 (sc-53116 AF546), Alexa Fluor® 594 (sc-53116 AF594) or Alexa Fluor® 647 (sc-53116 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53116 AF680) or Alexa Fluor® 790 (sc-53116 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Thy-1 (OX7) is recommended for detection of Thy-1.1 antigenic determinant of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for Thy-1 siRNA (h): sc-42837, Thy-1 siRNA (m): sc-36667, Thy-1 shRNA Plasmid (h): sc-42837-SH, Thy-1 shRNA Plasmid (m): sc-36667-SH, Thy-1 shRNA (h) Lentiviral Particles: sc-42837-V and Thy-1 shRNA (m) Lentiviral Particles: sc-36667-V.

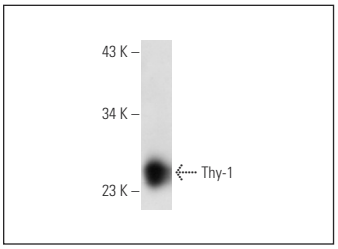
Molecular Weight of Thy-1 glycosylation: 25-37 kDa.

Positive Controls: CTLL-2 cell lysate: sc-2242, rat brain extract: sc-2392 or mouse brain extract: sc-2253.

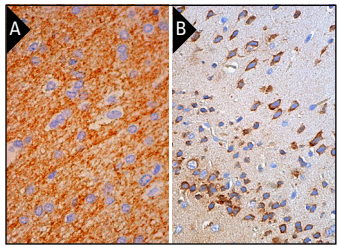
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



Thy-1 (OX7): sc-53116. Western blot analysis of Thy-1 expression in rat brain tissue extract.



Thy-1 (OX7): sc-53116. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing neuropil staining (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse brain tissue showing cytoplasmic staining of neuronal cells and glial cells (**B**).

SELECT PRODUCT CITATIONS

1. Yu, K., et al. 2008. TSP-1 secreted by bone marrow stromal cells contributes to retinal ganglion cell neurite outgrowth and survival. PLoS ONE 3: e2470.
2. Fei, J., et al. 2013. MicroRNA regulation of adipose derived stem cells in aging rats. PLoS ONE 8: e59238.
3. Qiu, W., et al. 2014. Sublytic C5b-9 triggers glomerular mesangial cell apoptosis via XAF1 gene activation mediated by p300-dependent IRF-1 acetylation. Cell Death Dis. 5: e1176.
4. Li, L., et al. 2015. Neurotrophine-3 may contribute to neuronal differentiation of mesenchymal stem cells through the activation of the bone morphogenetic protein pathway. Cell. Mol. Biol. Lett. 20: 385-403.
5. Manzanares, M.Á., et al. 2017. Transforming growth factors α and β are essential for modeling cholangiocarcinoma desmoplasia and progression in a three-dimensional organotypic culture model. Am. J. Pathol. 187: 1068-1092.
6. Fang, C., et al. 2018. S1P transporter SPNS2 regulates proper postnatal retinal morphogenesis. FASEB J. 32: 3597-3613.
7. Benetti, F., et al. 2019. *In vivo* analysis of the presence of heme oxygenase-1, transcription factor Jun-D and $CD90^+/CD73^+/CD105^+/CD45^-$ cells in the pulp of bleached teeth. Int. Endod. J. 52: 1723-1737.
8. Zhao, M., et al. 2020. The role and potential mechanism of p75NTR in mineralization via *in vivo* p75NTR knockout mice and *in vitro* ectomesenchymal stem cells. Cell Prolif. 53: e12758.
9. Yang, G., et al. 2021. Construction of tissue engineering bone with the co-culture system of ADSCs and VECs on partially deproteinized biologic bone *in vitro:* a preliminary study. Mol. Med. Rep. 23: 58.

RESEARCH USE

For research use only, not for use in diagnostic procedures.