

Thy-1 (HIS51): sc-19614



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. Thy-1⁺ 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 (HIS51) is a mouse monoclonal antibody raised against bone marrow cells of rat origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Thy-1 (HIS51) is available conjugated to agarose (sc-19614 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-19614 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-19614 PE), fluorescein (sc-19614 FITC), Alexa Fluor® 488 (sc-19614 AF488), Alexa Fluor® 546 (sc-19614 AF546), Alexa Fluor® 594 (sc-19614 AF594) or Alexa Fluor® 647 (sc-19614 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-19614 AF680) or Alexa Fluor® 790 (sc-19614 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, Thy-1 (HIS51) is available conjugated to Alexa Fluor® 405 (sc-19614 AF405, 200 µg/ml), for IF, IHC(P) and FCM.

APPLICATIONS

Thy-1 (HIS51) is recommended for detection of Thy-1 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 10⁶ 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.

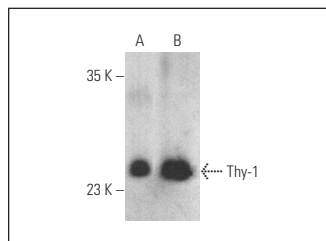
Molecular Weight of Thy-1 glycosylation: 25-37 kDa.

Positive Controls: mouse brain extract: sc-2253, rat brain extract: sc-2392 or BW5147 cell lysate: sc-3800.

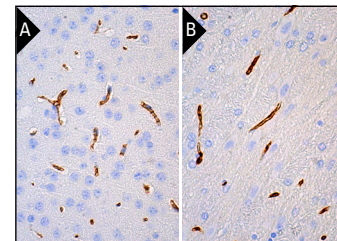
STORAGE

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

DATA



Thy-1 (HIS51) HRP: sc-19614 HRP. Direct western blot analysis of Thy-1 expression in rat brain (A) and mouse PBL (B) tissue extracts.



Thy-1 (HIS51): sc-19614. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse (A) and rat (B) brain tissue showing membrane and cytoplasmic staining of endothelial cells.

SELECT PRODUCT CITATIONS

- Matsuda, T., et al. 2004. Electroporation and RNA interference in the rodent retina *in vivo* and *in vitro*. *Proc. Natl. Acad. Sci. USA* 101: 16-22.
- Matsuda, T., et al. 2008. Analysis of gene function in the retina. *Methods Mol. Biol.* 423: 259-278.
- Saito, T., et al. 2009. TrkB-T1 receptors on Muller cells play critical role in brain-derived neurotrophic factor-mediated photoreceptor protection against phototoxicity. *Curr. Eye Res.* 34: 580-588.
- Crema, A., et al. 2011. Cord blood CD133 cells define an OV6-positive population that can be differentiated *in vitro* into engraftable bipotent hepatic progenitors. *Stem Cells Dev.* 20: 2009-2021.
- Hosoya, A., et al. 2012. Thy-1-positive cells in the subodontoblastic layer possess high potential to differentiate into hard tissue-forming cells. *Histochem. Cell Biol.* 137: 733-742.
- Cheng, H., et al. 2014. Neuroprotection of a novel cyclopeptide C*HSDGIC* from the cyclization of PACAP (1-5) in cellular and rodent models of retinal ganglion cell apoptosis. *PLoS ONE* 9: e108090.
- Chien, C.C., et al. 2017. Suppression of HSP27 restores retinal function and protects photoreceptors from apoptosis in a light-induced retinal degeneration animal model. *Invest. Ophthalmol. Vis. Sci.* 58: 3107-3117.
- Hikage, F., et al. 2018. HIF2A-LOX pathway promotes fibrotic tissue remodeling in thyroid-associated orbitopathy. *Endocrinology* 160: 20-35.
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RESEARCH USE

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

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