SANTA CRUZ BIOTECHNOLOGY, INC.

PCM1 (G-6): sc-398365

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Pericentriolar material is a dynamic substance whose composition can oscillate during the cell cycle. PCM1 (pericentriolar material 1), is a centrosomal protein that demonstrates a distinct cell cycle-dependent association with the centrosome complex. PCM1 is securely associated with the centrosome complex through G_1, S, and a portion of G_2. However, late in G_2, as cells prepare for mitosis, PCM1 dissociates from the centrosome and then remains evenly diffused throughout the cell during mitosis before re-associating with the centrosomes in the G_1 phase progeny cells. The chromosomal localization of the PCM1 on chromosome 8p22 is one of interest since this region is commonly deleted in several tumors. In thyroid tumor tissue, PCM1 expression drastically decreases and its subcellular localization is shifted.

CHROMOSOMAL LOCATION

Genetic locus: PCM1 (human) mapping to 8p22; Pcm1 (mouse) mapping to 8 A4.

SOURCE

PCM1 (G-6) is a mouse monoclonal antibody within a C-terminal cytoplasmic domain.

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.

PCM1 (G-6) is available conjugated to agarose (sc-398365 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-398365 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398365 PE), fluorescein (sc-398365 FITC), Alexa Fluor® 488 (sc-398365 AF488), Alexa Fluor® 546 (sc-398365 AF546), Alexa Fluor® 594 (sc-398365 AF594) or Alexa Fluor® 647 (sc-398365 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398365 AF680) or Alexa Fluor® 790 (sc-398365 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

PCM1 (G-6) is recommended for detection of PCM1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PCM1 siRNA (h): sc-61305, PCM1 siRNA (m): sc-61306, PCM1 shRNA Plasmid (h): sc-61305-SH, PCM1 shRNA Plasmid (m): sc-61306-SH, PCM1 shRNA (h) Lentiviral Particles: sc-61305-V and PCM1 shRNA (m) Lentiviral Particles: sc-61306-V.

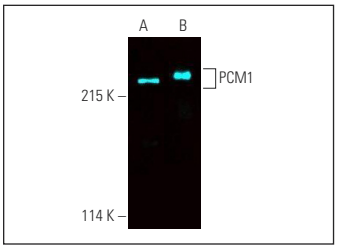
Molecular Weight of PCM1: 228 kDa.

Positive Controls: Neuro-2A whole cell lysate: sc-364185 or NTERA-2 cl.D1 whole cell lysate: sc-364181.

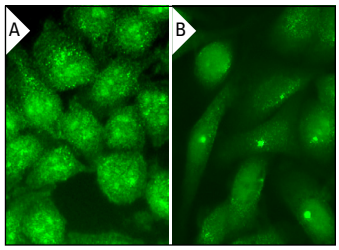
STORAGE

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

DATA



PCM1 (G-6) Alexa Fluor® 647: sc-398365 AF647. Direct fluorescent western blot analysis of PCM1 expression in Neuro-2A (**A**) and NTERA-2 cl.D1 (**B**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214.



PCM1 (G-6): sc-398365. Immunofluorescence staining of formalin-fixed HeLa cells showing nuclear and cytoplasmic localization (**A**). PCM1 (G-6) Alexa Fluor® 488: sc-398365 AF488. Direct immunofluorescence staining of formalin-fixed SW480 cells showing centrosome, nuclear and cytoplasmic localization. Blocked with UltraCruz® Blocking Reagent: sc-516214 (**B**).

SELECT PRODUCT CITATIONS

1. Li, X., et al. 2017. USP9X regulates centrosome duplication and promotes breast carcinogenesis. Nat. Commun. 8: 14866.
2. Holdgaard, S.G., et al. 2019. Selective autophagy maintains centrosome integrity and accurate mitosis by turnover of centriolar satellites. Nat. Commun. 10: 4176.
3. Wang, L., et al. 2020. Single-cell reconstruction of the adult human heart during heart failure and recovery reveals the cellular landscape underlying cardiac function. Nat. Cell Biol. 22: 108-119.
4. Kyun, M.L., et al. 2020. Wnt3a stimulation promotes primary ciliogenesis through β-catenin phosphorylation-induced reorganization of centriolar satellites. Cell Rep. 30: 1447-1462.e5.
5. Zhang, C., et al. 2020. Distinct roles of TRAPPC8 and TRAPPC12 in ciliogenesis via their interactions with OFD1. Front. Cell Dev. Biol. 8: 148.
6. Wang, Y., et al. 2020. Single-cell analysis of murine fibroblasts identifies neonatal to adult switching that regulates cardiomyocyte maturation. Nat. Commun. 11: 2585.
7. Prasai, A., et al. 2020. The BBSome assembly is spatially controlled by BBS1 and BBS4 in human cells. J. Biol. Chem. 295: 14279-14290.
8. Vergarajauregui, S., et al. 2020. AKAP6 orchestrates the nuclear envelope microtubule-organizing center by linking Golgi and nucleus via AKAP9. Elife 9: e61669.
9. Wang, J., et al. 2020. Talpid3-mediated centrosome integrity restrains neural progenitor delamination to sustain neurogenesis by stabilizing adherens junctions. Cell Rep. 33: 108495.

RESEARCH USE

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