SANTA CRUZ BIOTECHNOLOGY, INC.

Cas-L (2G9): sc-33659

BACKGROUND

Cas family proteins are adhesion docking molecules that mediate protein-protein interactions and contribute to a number of signal transduction pathways. Cas-L (also designated human enhancer of filamentation (HEF1) and neural precursor cell expressed, developmentally down-regulated 9 (NEDD9), participates in integrin and growth factor signaling pathways that regulate growth, motility and apoptosis. Cas-L consists of two isoforms, p105 and p115. The larger molecular weight form is a result of Ser/Thr phosphorylation. Cas-L phosphorylation is dependent on cell adhesion and Src kinase activity. Cas-L acts as a downstream effector of FAK in the invasive behavior of glioblastoma cells. TGFβ1 regulates Cas-L gene expression and influences phosphorylation. Adhesion-dependent Actin organization regulates proteasomal turnover of Cas-L through the activity of PP2A. Tyrosine phosphorylated Cas-L can bind FAK in dendrite and soma of neurons after ischemia. Cas-L can promote neurite outgrowth of PC-12 cells.

CHROMOSOMAL LOCATION

Genetic locus: NEDD9 (human) mapping to 6p24.2; Nedd9 (mouse) mapping to 13 A3.3.

SOURCE

Cas-L (2G9) is a mouse monoclonal antibody raised against amino acids 82-398 of Cas-L of human 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.

Cas-L (2G9) is available conjugated to agarose (sc-33659 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-33659 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-33659 PE), fluorescein (sc-33659 FITC), Alexa Fluor® 488 (sc-33659 AF488), Alexa Fluor® 546 (sc-33659 AF546), Alexa Fluor® 594 (sc-33659 AF594) or Alexa Fluor® 647 (sc-33659 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-33659 AF680) or Alexa Fluor® 790 (sc-33659 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

Cas-L (2G9) is recommended for detection of Cas-L 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Cas-L siRNA (h): sc-40794, Cas-L siRNA (m): sc-40795, Cas-L shRNA Plasmid (h): sc-40794-SH, Cas-L shRNA Plasmid (m): sc-40795-SH, Cas-L shRNA (h) Lentiviral Particles: sc-40794-V and Cas-L shRNA (m) Lentiviral Particles: sc-40795-V.

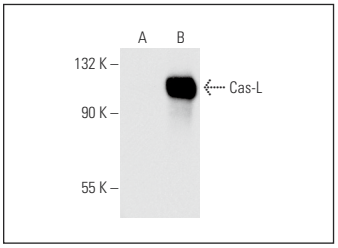
Molecular Weight of Cas-L: 105 kDa.

Positive Controls: Cas-L (h): 293T Lysate: sc-159485, HeLa whole cell lysate: sc-2200 or CTLL-2 cell lysate: sc-2242.

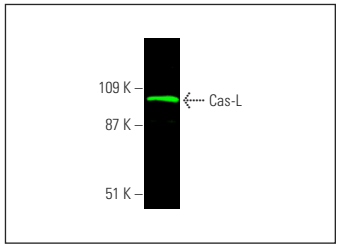
STORAGE

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

DATA



Cas-L (2G9): sc-33659. Western blot analysis of Cas-L expression in non-transfected: sc-117752 (**A**) and human Cas-L transfected: sc-159485 (**B**) 293T whole cell lysates.



Cas-L (2G9): sc-33659. Near-infrared western blot analysis of Cas-L expression in CTLL-2 whole cell lysate. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.

SELECT PRODUCT CITATIONS

1. Izumchenko, E., et al. 2009. NEDD9 promotes oncogenic signaling in mammary tumor development. Cancer Res. 69: 7198-7206.
2. Moore, F.E., et al. 2010. The WW-HECT protein Smurf2 interacts with the docking protein NEDD9/HEF1 for aurora a activation. Cell Div. 5: 22.
3. Singh, M.K., et al. 2010. Enhanced genetic instability and dasatinib sensitivity in mammary tumor cells lacking NEDD9. Cancer Res. 70: 8907-8916.
4. Lucas, J.T., et al. 2010. Regulation of invasive behavior by vascular endothelial growth factor is HEF1-dependent. Oncogene 29: 4449-4459.
5. Sekizawa, N., et al. 2011. Transcriptome analysis of aldosterone-regulated genes in human vascular endothelial cell lines stably expressing mineralocorticoid receptor. Mol. Cell. Endocrinol. 341: 78-88.
6. Grauzam, S., et al. 2018. NEDD9 stimulated MMP9 secretion is required for invadopodia formation in oral squamous cell carcinoma. Oncotarget 9: 25503-25516.
7. Addison, J.B., et al. 2021. Functional hierarchy and cooperation of EMT master transcription factors in breast cancer metastasis. Mol. Cancer Res. 19: 784-798.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.