



Cas-L (h2): 293T Lysate: sc-159485

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. TGF β 1 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.

REFERENCES

1. Law, S.F., et al. 2000. The docking protein HEF1 is an apoptotic mediator at focal adhesion sites. *Mol. Cell. Biol.* 20: 5184-5195.
2. Liu, X., et al. 2000. A novel ability of Smad3 to regulate proteasomal degradation of a Cas family member HEF1. *EMBO J.* 19: 6759-6769.
3. Zheng, M., et al. 2002. Regulation of HEF1 expression and phosphorylation by TGF- β 1 and cell adhesion. *J. Biol. Chem.* 277: 39599-39608.
4. Iwata, S., et al. 2005. HTLV-I Tax induces and associates with Crk-associated substrate lymphocyte type (Cas-L). *Oncogene* 24: 1262-1271.
5. Pugacheva, E.N., et al. 2005. The focal adhesion scaffolding protein HEF1 regulates activation of the Aurora-A and Nek2 kinases at the centrosome. *Nat. Cell Biol.* 7: 937-946.
6. Sasaki, T., et al. 2005. Nedd9 protein, a Cas-L homolog, is upregulated after transient global ischemia in rats: possible involvement of Nedd9 in the differentiation of neurons after ischemia. *Stroke* 36: 2457-2462.
7. Natarajan, M., et al. 2005. HEF1 is a necessary and specific downstream effector of FAK that promotes the migration of glioblastoma cells. *Oncogene* 25: 1721-1732.
8. Zheng, M., et al. 2006. Cell adhesion regulates Ser/Thr phosphorylation and proteasomal degradation of HEF1. *J. Cell Sci.* 119: 96-103.
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CHROMOSOMAL LOCATION

Genetic locus: NEDD9 (human) mapping to 6p24.2.

PRODUCT

Cas-L (h2): 293T Lysate represents a lysate of human Cas-L transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

RESEARCH USE

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

APPLICATIONS

Cas-L (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive Cas-L antibodies. Recommended use: 10-20 μ l per lane.

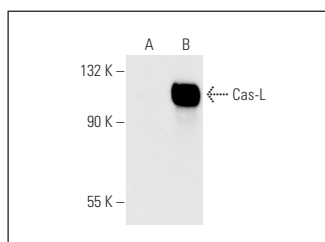
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Cas-L (2B11): sc-33658 is recommended as a positive control antibody for Western Blot analysis of enhanced human Cas-L expression in Cas-L transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

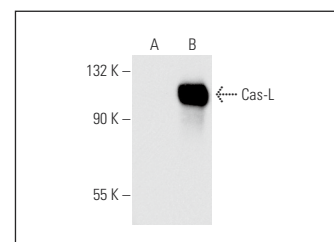
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



Cas-L (2B11): sc-33658. 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. 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.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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