

erasin (D-16): sc-161041

BACKGROUND

Erasin, also known as UBXD2 (UBX domain containing protein 2) or UBXD1, is an endoplasmic reticulum (ER) and nuclear envelope membrane protein. Expressed in a variety of tissues, such as brain, placenta, heart, liver, prostate, kidney, pancreas, lung and skeletal muscle, erasin contains one UBX domain and participates in the clearing of ERAD (endoplasmic reticulum-associated protein degradation) substrates. The UBX domain of erasin is responsible for mediating its direct interaction with VCP (valosin-containing protein), an AAA-ATPase molecular chaperone. In response to ER stress, erasin expression is induced. The knockdown of erasin expression leads to the inhibition of ERAD, suggesting an important function of erasin in the ERAD pathway. In addition, erasin may be involved in Alzheimer's disease, as it is known to accumulate in neurofibrillary degenerating neurons in patients with Alzheimer's disease.

REFERENCES

- Nagase, T., et al. 1996. Prediction of the coding sequences of unidentified human genes. VI. The coding sequences of 80 new genes (KIAA0201-KIAA0280) deduced by analysis of cDNA clones from cell line KG-1 and brain. *DNA Res.* 3: 321-329, 341-354.
- Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611216. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Cras-Méneur, C., et al. 2004. An expression profile of human pancreatic islet mRNAs by serial analysis of gene expression (SAGE). *Diabetologia* 47: 284-299.
- Liang, J., et al. 2006. Characterization of erasin (UBXD2): a new ER protein that promotes ER-associated protein degradation. *J. Cell Sci.* 119: 4011-4024.
- Yamauchi, S., et al. 2007. Differential expression pattern of UBX family genes in *Caenorhabditis elegans*. *Biochem. Biophys. Res. Commun.* 358: 545-552.
- Veerla, S., et al. 2008. Promoter analysis of epigenetically controlled genes in bladder cancer. *Genes Chromosomes Cancer* 47: 368-378.

CHROMOSOMAL LOCATION

Genetic locus: UBXL4 (human) mapping to 2q21.3; Ubxl4 (mouse) mapping to 1 E4.

SOURCE

erasin (D-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of erasin of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-161041 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

erasin (D-16) is recommended for detection of erasin 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

erasin (D-16) is also recommended for detection of erasin in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for erasin siRNA (h): sc-94539, erasin siRNA (m): sc-144920, erasin shRNA Plasmid (h): sc-94539-SH, erasin shRNA Plasmid (m): sc-144920-SH, erasin shRNA (h) Lentiviral Particles: sc-94539-V and erasin shRNA (m) Lentiviral Particles: sc-144920-V.

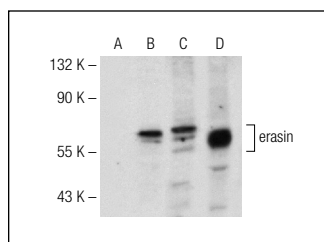
Molecular Weight of erasin: 57 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, mouse thymus extract: sc-2406 or erasin (m): 293T Lysate: sc-120085.

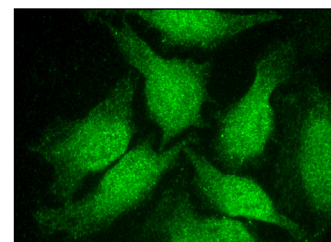
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

DATA



erasin (D-16): sc-161041. Western blot analysis of erasin expression in non-transfected 293T: sc-117752 (A), mouse erasin transfected 293T: sc-120085 (B) and KNRK (C) whole cell lysates and mouse thymus tissue extract (D).



erasin (D-16): sc-161041. Immunofluorescence staining of formalin-fixed HeLa cells showing nuclear and cytoplasmic localization.

STORAGE

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

RESEARCH USE

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