

FACE-1 (C-13): sc-34777

BACKGROUND

FACE-1, or zinc metalloproteinase Ste24 homolog (Zmpste24), is a metalloproteinase responsible for cleaving prelamin A to lamin A, a component of the nuclear envelope. An integral membrane protein, FACE-1 is widely expressed in tissues throughout the human body and uses zinc as a cofactor, with one zinc ion per subunit. Mutations in the FACE-1 gene are linked to laminopathies in humans, including restrictive dermopathy (RD) and mandibuloacral dysplasia (MAD), both characterized by severe developmental abnormalities and in the case of RD, early neonatal death. Accumulation of unprocessed prelamin A may be responsible for deficits associated with these genetic disorders.

REFERENCES

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- Gruber, J., et al. 2005. RNAi of FACE-1 protease results in growth inhibition of human cells expressing lamin A: implications for Hutchinson-Gilford progeria syndrome. *J. Cell Sci.* 118: 689-696.
- Corrigan, D.P., et al. 2005. Prelamin A endoproteolytic processing *in vitro* by recombinant Zmpste24. *Biochem. J.* 387: 129-138.
- SWISS-PROT/TrEMBL (O75844). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>

CHROMOSOMAL LOCATION

Genetic locus: ZMPSTE24 (human) mapping to 1p34.2; Zmpste24 (mouse) mapping to 4 D2.2.

SOURCE

FACE-1 (C-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of FACE-1 of human origin.

STORAGE

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

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-34777 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FACE-1 (C-13) is recommended for detection of FACE-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

FACE-1 (C-13) is also recommended for detection of FACE-1 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for FACE-1 siRNA (h): sc-45524, FACE-1 siRNA (m): sc-45525, FACE-1 shRNA Plasmid (h): sc-45524-SH, FACE-1 shRNA Plasmid (m): sc-45525-SH, FACE-1 shRNA (h) Lentiviral Particles: sc-45524-V and FACE-1 shRNA (m) Lentiviral Particles: sc-45525-V.

Molecular Weight of FACE-1: 55 kDa.

Positive Controls: Mouse cerebellum extract: sc-2403.

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) 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.

SELECT PRODUCT CITATIONS

- Ragnauth, C.D., et al. 2010. Prelamin A acts to accelerate smooth muscle cell senescence and is a novel biomarker of human vascular aging. *Circulation* 121: 2200-2210.

RESEARCH USE

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

PROTOCOLS

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