SANTA CRUZ BIOTECHNOLOGY, INC.

TMED4 (W-14): sc-104699

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The Power to Question

BACKGROUND

TMED4 (transmembrane emp24 domain-containing protein 4), also known as ERS25 (endoplasmic reticulum stress-response protein 25) and putative NFκB-activating protein 156, is a 225 amino acid protein that is a member of the EMP24/GP25L family. Like most members of this family, TMED4 is a single-pass type I membrane protein containing one GOLD domain. The GOLD (Golgi dynamics) domain is a region of about 90 to 150 amino acids that mediates protein-protein interactions. The GOLD domain interacts with lipid, sterol or fatty acid-domains as well as with the RUN domain, which interacts with cytoskeletal filaments, of membrane proteins. Localized to the endoplasmic reticulum, TMED4 is induced by ER-specific stress, heat shock and oxidative stress. Knockdown of TMED4 mRNA results in a significant reduction in apoptosis as well as a reduction in reactive oxidative species. There are three isoforms of TMED4 that are produced as a result of alternative splicing events.

REFERENCES

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3. Matsuda, A., et al. 2003. Large-scale identification and characterization of human genes that activate NFκB and MAPK signaling pathways. Oncogene 22: 3307-3318.
4. Nakanishi, K., et al. 2004. Localization and function in endoplasmic reticulum stress tolerance of ERdj3, a new member of Hsp40 family protein. Cell Stress Chaperones 9: 253-264.
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CHROMOSOMAL LOCATION

Genetic locus: TMED4 (human) mapping to 7p13; Tmed4 (mouse) mapping to 11 A1.

SOURCE

TMED4 (W-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TMED4 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-104699 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TMED4 (W-14) is recommended for detection of TMED4 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).

TMED4 (W-14) is also recommended for detection of TMED4 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TMED4 siRNA (h): sc-89384, TMED4 siRNA (m): sc-106619, TMED4 shRNA Plasmid (h): sc-89384-SH, TMED4 shRNA Plasmid (m): sc-106619-SH, TMED4 shRNA (h) Lentiviral Particles: sc-89384-V and TMED4 shRNA (m) Lentiviral Particles: sc-106619-V.

Molecular Weight of TMED4 isoforms: 26/24/21 kDa.

Positive Controls: EOC 20 whole cell lysate: sc-364187.

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.

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.

PROTOCOLS

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