

# TMED4 (A-24): sc-134094

## BACKGROUND

TMED4 (transmembrane emp24 domain-containing protein 4), also known as ERS25 (endoplasmic reticulum stress-response protein 25) and Putative NF $\kappa$ B-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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- Anantharaman, V., et al. 2002. The GOLD domain, a novel protein module involved in Golgi function and secretion. *Genome Biol.* 3: research0023.
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- 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.
- Ishiyama, T., et al. 2007. OCIA domain containing 2 is highly expressed in adenocarcinoma mixed subtype with bronchioloalveolar carcinoma component and is associated with better prognosis. *Cancer Sci.* 98: 50-57.
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## CHROMOSOMAL LOCATION

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

## SOURCE

TMED4 (A-24) is an affinity purified rabbit polyclonal antibody raised against synthetic TMED4 peptide of human origin.

## PRODUCT

Each vial contains 50  $\mu$ g IgG in 500  $\mu$ l PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

## APPLICATIONS

TMED4 (A-24) 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), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

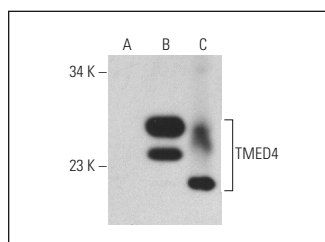
Molecular Weight of TMED4 isoforms: 26/24/21 kDa.

Positive Controls: TMED4 (h): 293T Lysate: sc-116509, mouse liver extract: sc-2256 or EOC 20 whole cell lysate: sc-364187.

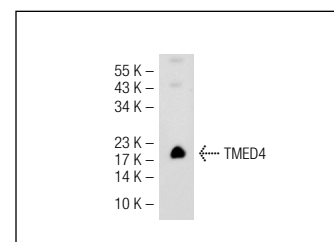
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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).

## DATA



TMED4 (A-24): sc-134094. Western blot analysis of TMED4 expression in non-transfected: sc-117752 (A) and human TMED4 transfected: sc-116509 (B) 293T whole cell lysates and mouse liver tissue extract (C).



TMED4 (A-24): sc-134094. Western blot analysis of TMED4 expression in EOC 20 whole cell lysate.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.