

TGase4 (h3): 293 Lysate: sc-159015

BACKGROUND

Terminally differentiating mammalian epidermal cells acquire an insoluble, 10 to 20 nm thick protein deposit on the intracellular surface of the plasma membrane known as the cross-linked cell envelope (CE). The CE is a component of the epidermis that is generated through formation of disulfide bonds and γ -glutamyl-lysine isopeptide bonds, which are formed by the action of transglutaminases (TGases). TGases are intercellularly localizing, Ca^{2+} -dependent enzymes, which catalyze the formation of isopeptide bonds by transferring an amine on to glutamyl residues, thereby cross-linking glutamine residues and lysine residues in substrate proteins. TGases influence numerous biological processes including blood coagulation, epidermal differentiation, seminal fluid coagulation, fertilization, cell differentiation and apoptosis. TGase4, also known as TGM4, TGP or hTGP, is a typical TGase that is specifically expressed in prostate tissue.

REFERENCES

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3. Kim, I.G., et al. 1992. Structure and organization of the human transglutaminase 1 gene. *J. Biol. Chem.* 267: 7710-7717.
4. Ueki, S., et al. 1996. Dual functions of transglutaminase in novel cell adhesion. *J. Cell Sci.* 109: 2727-2735.
5. Dubbink, H.J., et al. 1996. Tissue specific and androgen-regulated expression of human prostate-specific transglutaminase. *Biochem. J.* 315: 901-908.
6. Dubbink, H.J., et al. 1998. The human prostate-specific transglutaminase gene (TGM4): genomic organization, tissue-specific expression, and promoter characterization. *Genomics* 51: 434-444.
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8. Nemes, Z., et al. 1999. A novel function for transglutaminase 1: attachment of long-chain ω -hydroxyceramides to involucrin by ester bond formation. *Proc. Natl. Acad. Sci. USA* 96: 8402-8407.
9. Davies, G., et al. 2007. Expression of the prostate transglutaminase (TGase-4) in prostate cancer cells and its impact on the invasiveness of prostate cancer. *J. Exp. Ther. Oncol.* 6: 257-264.

CHROMOSOMAL LOCATION

Genetic locus: TGM4 (human) mapping to 3p21.31.

PRODUCT

TGase4 (h3): 293 Lysate represents a lysate of human TGase4 transfected 293 cells and is provided as 100 μg protein in 200 μl SDS-PAGE buffer.

APPLICATIONS

TGase4 (h3): 293 Lysate is suitable as a Western Blotting positive control for human reactive TGase4 antibodies. Recommended use: 10-20 μl per lane.

Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

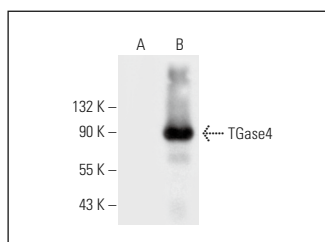
TGase4 (C-12): sc-398627 is recommended as a positive control antibody for Western Blot analysis of enhanced human TGase4 expression in TGase4 transfected 293 cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

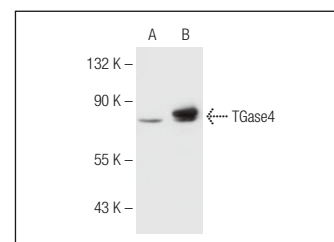
To ensure optimal results, the following support reagents are recommended:

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



TGase4 (C-12): sc-398627. Western blot analysis of TGase4 expression in non-transfected: sc-110760 (A) and human TGase4 transfected: sc-159015 (B) 293 whole cell lysates.



TGase4 (E-10): sc-271382. Western blot analysis of TGase4 expression in non-transfected: sc-110760 (A) and human TGase4 transfected: sc-159015 (B) 293 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.

RESEARCH USE

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

PROTOCOLS

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