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## Produktinformation



Forschungsprodukte & Biochemikalien



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Diagnostik & molekulare Diagnostik



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### Zuschläge

- Mindermengenzuschlag
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- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

# TGase4 (h2): 293T Lysate: sc-176212

## 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  $\gamma$ -glutamyl-lysine isodipeptide bonds, which are formed by the action of transglutaminases (TGases). TGases are intercellularly localizing,  $\text{Ca}^{2+}$ -dependent enzymes, which catalyze the formation of isopeptide bonds by transferring an amine on to glutaminy 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

1. Yamanishi, K., et al. 1991. Molecular cloning of human epidermal transglutaminase cDNA from keratinocytes in culture. *Biochem. Biophys. Res. Commun.* 175: 906-913.
2. Gentile, V., et al. 1991. Isolation and characterization of cDNA clones to mouse macrophage and human endothelial cell tissue transglutaminases. *J. Biol. Chem.* 266: 478-483.
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.
7. Dubbink, H.J., et al. 1999. An Sp1 binding site is essential for basal activity of the human prostate-specific transglutaminase gene (TGM4) promoter. *Gene* 240: 261-267.
8. Nemes, Z., et al. 1999. A novel function for transglutaminase 1: attachment of long-chain  $\omega$ -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 (TGase4) 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 (h2): 293T Lysate represents a lysate of human TGase4 transfected 293T cells and is provided as 100  $\mu\text{g}$  protein in 200  $\mu\text{l}$  SDS-PAGE buffer.

## APPLICATIONS

TGase4 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive TGase4 antibodies. Recommended use: 10-20  $\mu\text{l}$  per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

## STORAGE

Store at  $-20^{\circ}\text{C}$ . 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

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