



TM (m): 293T Lysate: sc-127663

BACKGROUND

Thrombomodulin (TM, also called CD141) is a type I membrane receptor that is specific to endothelial cells. TM has a cysteine-rich extracellular domain with 6 EGF-like regions. TM forms a complex with Thrombin, which activates Protein C to generate activated Protein C (APC), an anticoagulant enzyme. APC together with protein S inhibits coagulation by inactivating factors Va and VIIIa. Deletion of the TM gene results in embryonic lethality in mice.

REFERENCES

1. Jackman, R.W., Beeler, D.L., Fritze, L., Soff, G. and Rosenberg, R.D. 1987. Human thrombomodulin gene is intron depleted: nucleic acid sequences of the cDNA and gene predict protein structure and suggest sites of regulatory control. *Proc. Natl. Acad. Sci. USA* 84: 6425-6429.
2. Suzuki, K., Kusumoto, H., Deyashiki, Y., Nishioka, J., Maruyama, I., Zushi, M., Kawahara, S., Honda, G., Yamamoto, S. and Horiguchi, S. 1987. Structure and expression of human thrombomodulin, a Thrombin receptor on endothelium acting as a cofactor for Protein C activation. *EMBO J.* 6: 1891-1897.
3. Shirai, T., Shiojiri, S., Ito, H., Yamamoto, S., Kusumoto, H., Deyashiki, Y., Maruyama, I. and Suzuki, K. 1988. Gene structure of human thrombomodulin, a cofactor for Thrombin-catalyzed activation of Protein C. *J. Biochem.* 103: 281-285.
4. Healy, A.M., Rayburn, H.B., Rosenberg, R.D. and Weiler, H. 1995. Absence of the blood-clotting regulator thrombomodulin causes embryonic lethality in mice before development of a functional cardiovascular system. *Proc. Natl. Acad. Sci. USA* 92: 850-854.
5. Rosenberg, R.D. 1995. The absence of the blood clotting regulator thrombomodulin causes embryonic lethality in mice before development of a functional cardiovascular system. *Thromb. Haemost.* 74: 52-57.
6. Nishioka, J., Ido, M., Hayashi, T. and Suzuki, K. 1996. The Gla26 residue of Protein C is required for the binding of Protein C to thrombomodulin and endothelial cell Protein C receptor, but not to Protein S and factor Va. *Thromb. Haemost.* 75: 275-282.
7. Gerlitz, B. and Grinnell, B.W. 1996. Mutation of protease domain residues Ly37-39 in human Protein C inhibits activation by the thrombomodulin-Thrombin complex without affecting activation by free Thrombin. *J. Biol. Chem.* 271: 22285-22288.

CHROMOSOMAL LOCATION

Genetic locus: Thbd (mouse) mapping to 2 G3.

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.

PROTOCOLS

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

PRODUCT

TM (m): 293T Lysate represents a lysate of mouse TM transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

TM (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive TM antibodies. Recommended use: 10-20 µl per lane.

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

RESEARCH USE

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