



SZABO SCANDIC

Part of Europa Biosite

Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!



Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- 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

www.szabo-scandic.com

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

TKTL1 (h3): 293T Lysate: sc-171503

BACKGROUND

Transketolase, a crucial component of the pentose phosphate pathway (PPP), functions as a link between glycolysis and the non-oxidative part of the PPP, allowing the cell to adapt to varying metabolic conditions in response to environmental changes. TKTL1 (transketolase-like 1), also known as TKR or TKT2, is a 596 amino acid protein that localizes to both the nucleus and the cytoplasm and belongs to the Transketolase family. Expressed in both adult and fetal lung, brain, liver, heart and kidney, TKTL1 exists as a homodimer that uses calcium and thiamine pyrophosphate as cofactors to catalyze the conversion of sedoheptulose 7-phosphate and D-glyceraldehyde 3-phosphate to D-ribose 5-phosphate and D-xylulose 5-phosphate. Overexpression of TKTL1, which exists as multiple alternatively spliced isoforms, is associated with diabetic complications and epithelial tumor growth and invasion.

REFERENCES

1. McCool, B.A., Plonk, S.G., Martin, P.R. and Singleton, C.K. 1993. Cloning of human Transketolase cDNAs and comparison of the nucleotide sequence of the coding region in Wernicke-Korsakoff and non-Wernicke-Korsakoff individuals. *J. Biol. Chem.* 268: 1397-1404.
2. Coy, J.F., Dübel, S., Kioschis, P., Thomas, K., Micklem, G., Delius, H. and Poustka, A. 1996. Molecular cloning of tissue-specific transcripts of a Transketolase-related gene: implications for the evolution of new vertebrate genes. *Genomics* 32: 309-316.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 300044. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Coy, J.F., Dressler, D., Wilde, J. and Schubert, P. 2005. Mutations in the Transketolase-like gene TKTL1: clinical implications for neurodegenerative diseases, diabetes and cancer. *Clin. Lab.* 51: 257-273.
5. Langbein, S., Zerilli, M., Zur Hausen, A., Staiger, W., Rensch-Boschert, K., Lukan, N., Popa, J., Ternullo, M.P., Steidler, A., Weiss, C., Grobholz, R., Willeke, F., Alken, P., Stassi, G., Schubert, P. and Coy, J.F. 2006. Expression of Transketolase TKTL1 predicts colon and urothelial cancer patient survival: Warburg effect reinterpreted. *Br. J. Cancer* 94: 578-585.
6. Staiger, W.I., Coy, J.F., Grobholz, R., Hofheinz, R.D., Lukan, N., Post, S., Schwarzbach, M.H. and Willeke, F. 2006. Expression of the mutated Transketolase TKTL1, a molecular marker in gastric cancer. *Oncol. Rep.* 16: 657-661.
7. Zhang, S., Yang, J.H., Guo, C.K. and Cai, P.C. 2007. Gene silencing of TKTL1 by RNAi inhibits cell proliferation in human hepatoma cells. *Cancer Lett.* 253: 108-114.
8. Völker, H.U., Hagemann, C., Coy, J., Wittig, R., Sommer, S., Stojic, J., Haubitz, I., Vince, G.H., Kämmerer, U. and Monoranu, C.M. 2008. Expression of Transketolase-like 1 and activation of Akt in grade IV glioblastomas compared with grades II and III astrocytic gliomas. *Am. J. Clin. Pathol.* 130: 50-57.

CHROMOSOMAL LOCATION

Genetic locus: TKTL1 (human) mapping to Xq28.

PRODUCT

TKTL1 (h3): 293T Lysate represents a lysate of human TKTL1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

TKTL1 (h3): 293T Lysate is suitable as a Western Blotting positive control for human reactive TKTL1 antibodies.

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

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.