

# Transketolase (H-50): sc-67120

## BACKGROUND

Transketolase (TK or TKT), a member of the Transketolase family of proteins, is a multifunctional that plays a role in diabetes, cancer, Alzheimer's disease and Wernicke-Korsakoff's syndrome, a latent genetic neurological disorder. Transketolase is also important for the prevention of hyperglycemia-induced vascular damage. Transketolase is a crucial protein in the pentose phosphate pathway (PPP), where it catalyzes several reactions. In combination with Transaldolase, Transketolase 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. Transketolase activity is detected in small intestine epithelia, liver parenchyma, tongue, cornea and trachea. It is also expressed in the proximal tubules of kidney and in ganglion cells in medulla of the adrenal gland.

## REFERENCES

1. Salamon, C., et al. 1998. The mouse transketolase (TKT) gene: cloning, characterization and functional promoter analysis. *Genomics* 48: 209-220.
2. Kochetov, G.A., et al. 2001. Functional flexibility of the transketolase molecule. *Biochemistry* 66: 1077-1085.

## CHROMOSOMAL LOCATION

Genetic locus: TKT (human) mapping to 3p21.1; Tkt (mouse) mapping to 14 B.

## SOURCE

Transketolase (H-50) is a rabbit polyclonal antibody raised against amino acids 261-310 mapping within an internal region of Transketolase of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Transketolase (H-50) is recommended for detection of Transketolase of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Transketolase (H-50) is also recommended for detection of Transketolase in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for Transketolase siRNA (h): sc-45591, Transketolase siRNA (m): sc-45592, Transketolase shRNA Plasmid (h): sc-45591-SH, Transketolase shRNA Plasmid (m): sc-45592-SH, Transketolase shRNA (h) Lentiviral Particles: sc-45591-V and Transketolase shRNA (m) Lentiviral Particles: sc-45592-V.

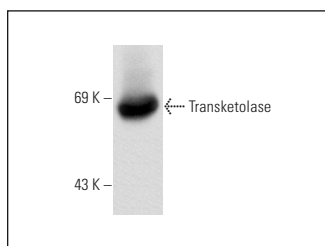
Molecular Weight of Transketolase: 78 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, rat kidney extract: sc-2394 or rat liver extract: sc-2395.

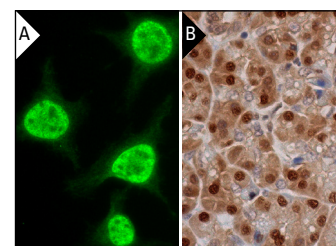
## RECOMMENDED SECONDARY REAGENTS

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). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



Transketolase (H-50): sc-67120. Western blot analysis of Transketolase expression in rat kidney tissue extract.



Transketolase (H-50): sc-67120. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing nuclear and cytoplasmic staining of exocrine glandular cells and Islets of Langerhans (B).

## SELECT PRODUCT CITATIONS

1. Monteleone, F., et al. 2013. Increased anaerobic metabolism is a distinctive signature in a colorectal cancer cellular model of resistance to anti-epidermal growth factor receptor antibody. *Proteomics* 13: 866-877.
2. Zhang, M., et al. 2014. Oral cancer cells may rewire alternative metabolic pathways to survive from siRNA silencing of metabolic enzymes. *BMC Cancer* 14: 223.

## 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.



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Try **Transketolase (H-7): sc-390179**, our highly recommended monoclonal alternative to Transketolase (H-50).