

Transcobalamin II (h4): 293T Lysate: sc-170399

BACKGROUND

Transcobalamin I (TCI) and Transcobalamin II (TCII) are secreted proteins belonging to the eukaryotic cobalamin transport proteins family and also to the vitamin B12-binding protein family. The genes encoding these proteins map to chromosome 11q12.1 and 22q12.2, respectively. Transcobalamin I is a constituent of secondary granules in neutrophils, while Transcobalamin II binds cobalamin and mediates its transport into cells. These plasma proteins are expressed in various tissues and secretions.

REFERENCES

1. Kalra, S., et al. 2004. Cobalamin (vitamin B12) binding, phylogeny, and synteny of human transcobalamin. *Arch. Biochem. Biophys.* 431: 189-196.
2. Cheeramakara, C., et al. 2005. Elevation of serum transcobalamin II in patients with scrub typhus. *Southeast Asian J. Trop. Med. Public Health* 36: 113-117.
3. Chen, X., et al. 2005. Influence of cobalamin deficiency compared with that of cobalamin absorption on serum holo-transcobalamin II. *Am. J. Clin. Nutr.* 81: 110-114.
4. Fedosov, S.N., et al. 2005. Mapping the functional domains of human transcobalamin using monoclonal antibodies. *FEBS. J.* 272: 3887-3898.
5. Swanson, D.A., et al. 2005. Evaluation of transcobalamin II polymorphisms as neural tube defect risk factors in an Irish population. *Birth Defects Res. A Clin. Mol. Teratol.* 73: 239-244.
6. Martinelli, M., et al. 2006. Study of four genes belonging to the folate pathway: transcobalamin 2 is involved in the onset of non-syndromic cleft lip with or without cleft palate. *Hum. Mutat.* 27: 294.
7. Böttiger, A.K., et al. 2007. Pyrosequencing assay for genotyping of the Transcobalamin II 776C>G polymorphism. *Scand. J. Clin. Lab. Invest.* 67: 247-251.
8. Aléssio, A.C., et al. 2007. Polymorphism C776G in the transcobalamin II gene and homocysteine, folate and vitamin B12 concentrations. Association with MTHFR C677T and A1298C and MTRR A66G polymorphisms in healthy children. *Thromb. Res.* 119: 571-577.
9. Serefhanoglu, S., et al. 2008. Measuring holotranscobalamin II, an early indicator of negative vitamin B12 balance, by radioimmunoassay in patients with ischemic cerebrovascular disease. *Ann. Hematol.* 87: 391-395.

CHROMOSOMAL LOCATION

Genetic locus: TCN2 (human) mapping to 22q12.2.

PRODUCT

Transcobalamin II (h4): 293T Lysate represents a lysate of human Transcobalamin II transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

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.

APPLICATIONS

Transcobalamin II (h4): 293T Lysate is suitable as a Western Blotting positive control for human reactive Transcobalamin II antibodies. Recommended use: 10-20 µl per lane.

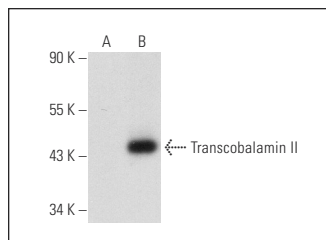
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Transcobalamin II (A-5): sc-137017 is recommended as a positive control antibody for Western Blot analysis of enhanced human Transcobalamin II expression in Transcobalamin II transfected 293T 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-IgGλ BP-HRP: sc-516132 or m-IgGλ BP-HRP (Cruz Marker): sc-516132-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



Transcobalamin II (A-5): sc-137017. Western blot analysis of Transcobalamin II expression in non-transfected: sc-117752 (A) and human Transcobalamin II transfected: sc-170399 (B) 293T whole cell lysates.

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.