Transcobalamin II (S-13): sc-34347



The Power to Question

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 11q11-q12 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

- Kalra, S., et al. 2004. Cobalamin (vitamin B12) binding, phylogeny and synteny of human transcobalamin. Arch. Biochem. Biophys. 431: 189-196.
- 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.
- 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.
- Fedosov, S.N., et al. 2005. Mapping the functional domains of human transcobalamin using monoclonal antibodies. FEBS J. 272: 3887-3898.
- 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; Tcn2 (mouse) mapping to 11 A1.

SOURCE

Transcobalamin II (S-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Transcobalamin II precursor of mouse origin.

RESEARCH USE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-34347 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Transcobalamin II (S-13) is recommended for detection of precursor and mature Transcobalamin II of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Transcobalamin II (S-13) is also recommended for detection of precursor and mature Transcobalamin II in additional species, including porcine.

Suitable for use as control antibody for Transcobalamin II siRNA (h): sc-45320, Transcobalamin II siRNA (m): sc-45321, Transcobalamin II shRNA Plasmid (h): sc-45320-SH, Transcobalamin II shRNA Plasmid (m): sc-45321-SH, Transcobalamin II shRNA (h) Lentiviral Particles: sc-45320-V and Transcobalamin II shRNA (m) Lentiviral Particles: sc-45321-V.

Molecular Weight of Transcobalamin II: 48 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

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

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