

# Transcobalamin II (E-13): sc-34344

## 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

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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.
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## CHROMOSOMAL LOCATION

Genetic locus: TCN2 (human) mapping to 22q12.2; Tcn2 (mouse) mapping to 11 A1.

## SOURCE

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

## PRODUCT

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

Blocking peptide available for competition studies, sc-34344 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## 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.

## APPLICATIONS

Transcobalamin II (E-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), 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).

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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



Transcobalamin II (E-13): sc-34344. Immunoperoxidase staining of formalin fixed, paraffin-embedded human prostate tissue showing membrane and cytoplasmic staining of glandular cells.

## PROTOCOLS

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Try **Transcobalamin II (A-5): sc-137017**, our highly recommended monoclonal alternative to Transcobalamin II (E-13).