

Transcobalamin II (A-5): sc-137017

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.

CHROMOSOMAL LOCATION

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

SOURCE

Transcobalamin II (A-5) is a mouse monoclonal antibody raised against amino acids 168-427 mapping at the C-terminus of Transcobalamin II of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Transcobalamin II (A-5) is available conjugated to agarose (sc-137017 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-137017 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-137017 PE), fluorescein (sc-137017 FITC), Alexa Fluor® 488 (sc-137017 AF488), Alexa Fluor® 546 (sc-137017 AF546), Alexa Fluor® 594 (sc-137017 AF594) or Alexa Fluor® 647 (sc-137017 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-137017 AF680) or Alexa Fluor® 790 (sc-137017 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

Transcobalamin II (A-5) is recommended for detection of precursor and mature Transcobalamin II of human origin by Western Blotting (starting dilution 1:100, 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).

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

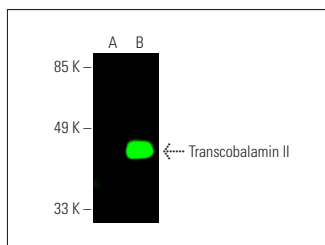
Molecular Weight of Transcobalamin II: 47 kDa.

Positive Controls: Transcobalamin II (h): 293 Lysate: sc-112334.

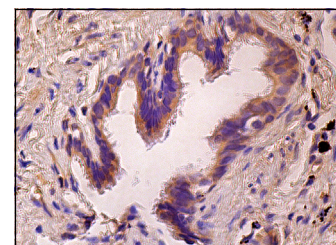
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGλ BP-FITC: sc-516185 or m-IgGλ BP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGλ BP-HRP: sc-516132 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Transcobalamin II (A-5): sc-137017. Near-infrared western blot analysis of Transcobalamin II expression in non-transfected: sc-110760 (A) and human Transcobalamin II transfected: sc-112334 (B) 293 whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGλ BP-CFL 680: sc-516194.



Transcobalamin II (A-5): sc-137017. Immunoperoxidase staining of formalin fixed, paraffin-embedded human bronchus tissue showing cytoplasmic staining of respiratory epithelial cells.

SELECT PRODUCT CITATIONS

- Alam, A., et al. 2016. Structural basis of transcobalamin recognition by human CD320 receptor. *Nat. Commun.* 7: 12100.
- Zhao, H., et al. 2016. Cell type-specific modulation of cobalamin uptake by bovine serum. *PLoS ONE* 11: e0167044.

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.