transferrin (D-9): sc-365871

BACKGROUND
Iron (Fe) is a tightly metabolically controlled mineral and growth factor present in all living cells. Iron not bound in erythrocyte hemoglobin is transported by transferrin (Tf), the iron transport protein of vertebrate serum. The transferrin protein contains two homologous domains, each of which contain an Fe-binding site. The majority of transferrin is synthesized in the liver and secreted into the blood, but it is also produced in lower amounts in tests and brain as well as in oligodendrocytes, where transferrin is an early marker of oligodendrocyte differentiation. From the blood, transferrin is internalized by erythroblasts and reticulocytes upon binding the transferrin receptor (TfR), also designated CD71, through a system of coated pits and vesicles. After Fe release, transferrin is returned to the extracellular medium, where it can be reused. Defects in the transferrin gene results in transferinemia, a rare autosomal recessive disorder characterized by microcytic anemia and iron loading.

CHROMOSOMAL LOCATION
Genetic locus: TF (human) mapping to 3q22.1.

SOURCE
transferrin (D-9) is a mouse monoclonal antibody raised against amino acids 326-390 of transferrin of human origin.

PRODUCT
Each vial contains 200 µg IgG1 lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

transferrin (D-9) is available conjugated to agarose (sc-365871 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365871 HRP), 200 µg/ml, for WB, [HCP] and ELISA; to either phycocyanin (sc-365871 PE), fluorescein (sc-365871 FITC), Alexa Fluor® 488 (sc-365871 AF488), Alexa Fluor® 546 (sc-365871 AF546), Alexa Fluor® 594 (sc-365871 AF594) or Alexa Fluor® 647 (sc-365871 AF647), 200 µg/ml, for WB (RGB), IF, HCP and FCM; and to either Alexa Fluor® 680 (sc-365871 AF680) or Alexa Fluor® 790 (sc-365871 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS
transferrin (D-9) is recommended for detection of transferrin 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 transferrin siRNA (h): sc-37176, transferrin shRNA Plasmid (h): sc-37176-SH and transferrin shRNA (h) Lentiviral Particles: sc-37176-V.

Molecular Weight of transferrin: 79 kDa.


RECOMMENDED SUPPORT REAGENTS
To ensure optimal results, the following support reagents are recommended:

DATA

STOREAGE
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.

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