

Datasheet for 009-0634

Human Transferrin Biotin

Overview

Description:	Human Transferrin Biotin Conjugated - 009-0634
Item No.:	009-0634
Size:	1 mg
Applications:	Dot Blot, Other
Origin:	Human

Product Details

Background:	Human transferrin is encoded by the TF gene and is an iron-binding blood plasma glycoprotein that controls the level of free iron in biological fluids. Human transferrin binds iron very tightly but reversibly. Human transferrin is the most important iron pool in mammals. Human transferrin has a molecular weight of around 80 kDa and contains 2 specific high-affinity Fe(III) binding sites. The affinity of Human transferrin for Fe(III) is extremely high but decreases progressively with decreasing pH below neutrality. Human Transferrin also plays a role in the immune system, creating environments low in iron for which many pathogenic bacteria are unable to thrive.
Synonyms:	Human Transferrin Biotin Conjugation
Species of Origin:	Human
Conjugate:	Biotin
Format:	Transferrin
Type:	Native Protein
F/P Ratio:	10-20

Target Details

Purity/Specificity:	This product was prepared from normal serum by a multi-stage process that includes delipidation and selective precipitation. Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-biotin, anti-Human Transferrin and anti-Human Serum.
Relevant Links:	• NCBI - AAB22049.1 • UniProtKB - Q06AH7

- **GenelD - 7018**

Application Details

Tested Applications:	Dot Blot
Suggested Applications:	Other (Based on references)
Application Note:	Human Transferrin Biotin has been tested in dot blot and is designed for Immunoblotting, ELISA, immunohistochemistry, immunomicroscopy as well as other antibody based assays using streptavidin or avidin conjugates.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.

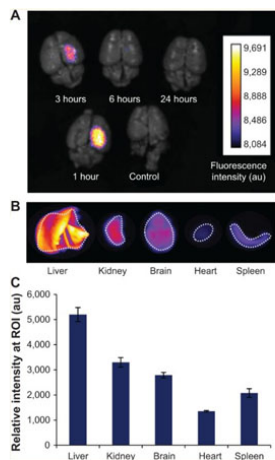
Formulation

Physical State:	Lyophilized
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	10 mg/ml Polyethylene Glycol (PEG-8000)
Reconstitution Volume:	1.0 mL
Reconstitution Buffer:	Restore with deionized water (or equivalent)

Shipping & Handling

Shipping Condition:	Ambient
Storage Condition:	Store vial at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



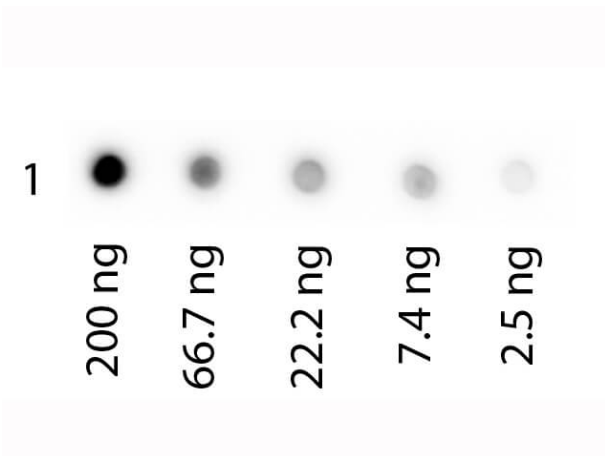
Immunofluorescence Microscopy

Ex vivo fluorescence imaging of biodistribution of the nanoparticles in an orthotopic mouse model of PBT. Notes: (A) Fluorescent signal observed in the brains of four separate mice with PBT (1–24 hours) injected intravenously (via tail vein) with transferrin-coated Prussian blue nanoparticles (MnPB-ATxRd-Tf). A control mouse with PBT was not injected with nanoparticles. (B) Representative ex vivo fluorescence imaging of organ biodistribution of the nanoparticles at 3 hours post-injection. (C) Histograms quantifying the observed fluorescence biodistribution of the nanoparticles 3 hours post-injection. ROIs for intensity measurements are indicated by white dashed lines in (B). Abbreviations: PBT, pediatric brain tumor; MnPB, manganese-containing Prussian blue; ATxRd, Texas Red-labeled avidin; Tf, transferrin; ROI, region of interest; au, arbitrary units. Human Transferrin Biotin Conjugated (p/n 009-0634).

Figure 8. PMID: 24920896.

Dot Blot

Dot Blot of Biotin conjugated Human Transferrin. Antigen: Human Transferrin Biotin. Load: 3-fold serial dilution starting at 200 ng. Primary antibody: None. Secondary antibody: Peroxidase streptavidin secondary antibody at 1:40,000 for 30 min at RT. Block: MB-070 for 60 min at RT.





Dot Blot

Dot Blot results of Human Transferrin Biotin Conjugated.
 Antigen: Human Transferrin Biotin Conjugated. Blot loaded
 at 3 fold dilution: 1. 100ng, 2. 33.3ng, 3. 11.1ng, 4. 3.70ng, 5.
 1.23ng. Blocking: MB-070 Buffer for 30 minutes at RT.
 Secondary Antibody: Streptavidin-HRP (p/n S000-03) at
 1:40,000 for 30 min at RT. Imaging System ChemiDoc, Filter
 used: Chemi.

References

- Dumont, MF et al. Manganese-containing Prussian blue nanoparticles for imaging of pediatric brain tumors.
International Journal of Nanomedicine (2014)

Disclaimer

No test method can provide total assurance that the hepatitis B virus, hepatitis C virus, human immunodeficiency virus, or any other infectious agents are absent. Thus, all blood products, including purified proteins derived from human blood sources, should be handled at Biosafety Level 2 as recommended by the CDC\NIH manual entitled Biosafety in Microbiological and Biomedical Laboratories for potentially infectious human serum, blood specimens or proteins derived from same. Source material for the human blood product supplied to your facility has been tested for the detection of HIV antibody, Hepatitis B surface antigen, antibody to Hepatitis C, HIV 1 antigen(s), antibody to HTLV - I/II, and syphilis by FDA guidelines. All units were found to be non-reactive/negative for these tests. All human blood source material is collected in FDA licensed centers and is tested with FDA approved test kits.

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.