

# Product Datasheet

## TfR (Transferrin R) Antibody - BSA Free NB100-92243

Unit Size: 0.1 ml

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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**NB100-92243**

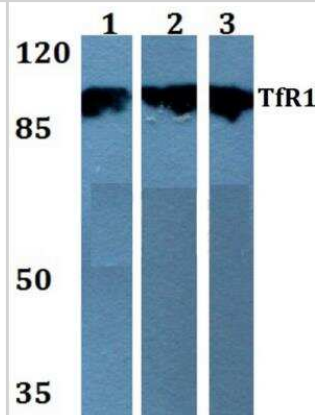
TfR (Transferrin R) Antibody - BSA Free

Product Information	
Unit Size	0.1 ml
Concentration	1.0 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	PBS
Target Molecular Weight	89 kDa
Product Description	
Description	Novus Biologicals Rabbit TfR (Transferrin R) Antibody - BSA Free (NB100-92243) is a polyclonal antibody validated for use in IHC, WB and ICC/IF. Anti-TfR (Transferrin R) Antibody: Cited in 18 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Rabbit
Gene ID	7037
Gene Symbol	TFRC
Species	Human, Mouse, Rat
Marker	Recycling Endosome Marker
Immunogen	Synthetic peptide made to an internal portion of human Transferrin R (between amino acids 20-75) [UniProt P02786]
Product Application Details	
Applications	Western Blot, Immunohistochemistry-Paraffin, Immunocytochemistry/Immunofluorescence, Immunohistochemistry, Proximity Ligation Assay
Recommended Dilutions	Western Blot 1:500-1:1000, Immunohistochemistry, Immunocytochemistry/Immunofluorescence reported in scientific literature, Immunohistochemistry-Paraffin 1:50-1:200, Proximity Ligation Assay reported in scientific literature (PMID 31091436)
Application Notes	Western blot (WB) analysis of Transferrin Receptor pAb in extracts from 293 cells. Immunohistochemistry analyzes of Transferrin Receptor pAb in paraffin-embedded human brain tissue.

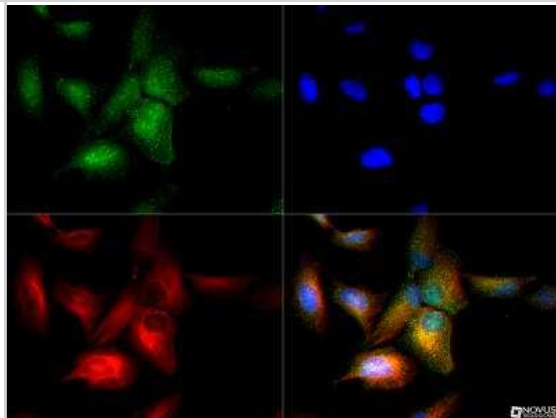


## Images

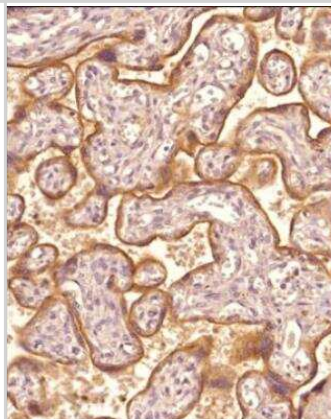
Western Blot: TfR (Transferrin R) Antibody [NB100-92243] - Analysis of TfR1 pAb at 1:500 dilution. (1) HEK293T whole cell lysate, (2) Raw264.7 whole cell lysate, and (3) H9C2 whole cell lysate.



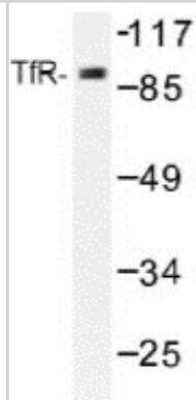
Immunocytochemistry/Immunofluorescence: TfR (Transferrin R) Antibody [NB100-92243] - Transferrin Receptor Antibody [NB100-92243] - Transferrin receptor antibody was tested at 1:50 in HeLa cells with DylLght 488 (green). Nuclei and alpha-tubulin were counterstained with DAPI (blue) and Dylight 550 (red). Image objective 40x.



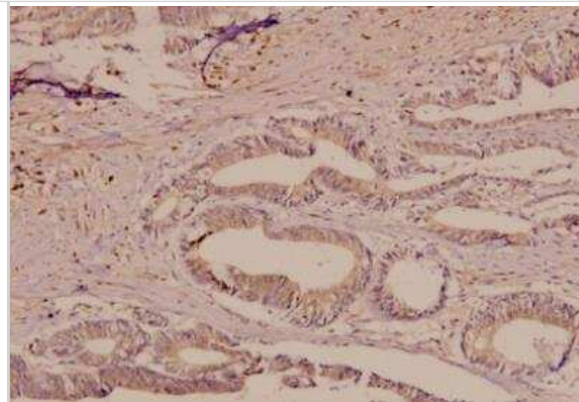
Immunohistochemistry-Paraffin: TfR (Transferrin R) Antibody - BSA Free [NB100-92243] - Analysis of a FFPE tissue section of human placenta using 1:200 dilution of TfR (Transferrin R) antibody NB100-92243. The staining was developed using HRP labeled anti-rabbit secondary antibody and DAB reagent, and nuclei of cells were counter-stained with hematoxylin.



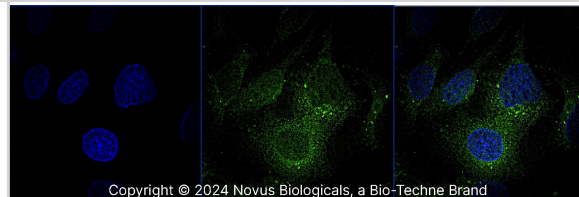
Western Blot: TfR (Transferrin R) Antibody [NB100-92243] - Analysis of Transferrin Receptor Antibody in extracts from 293 cells.



Immunohistochemistry-Paraffin: TfR (Transferrin R) Antibody [NB100-92243] - Paraffin-embedded human colorectal carcinoma tissue at 1:50.



TfR (Transferrin R) was detected in immersion fixed HepG2 human hepatocellular carcinoma cell line using Rabbit anti- TfR (Transferrin R) Affinity Purified Polyclonal Antibody conjugated to Alexa Fluor® 488 (Catalog # NB100-92243AF488) (green) at 10 µg/mL overnight at 4C. Cells were counterstained with DAPI (dark blue). Cells were imaged using a 100X objective and digitally deconvolved.



## Publications

Li T, Zhao L, Li Y et al. PPM1K mediates metabolic disorder of branched-chain amino acid and regulates cerebral ischemia-reperfusion injury by activating ferroptosis in neurons Cell Death Dis 2023-09-26 [PMID: 37752100] (Immunohistochemistry, Human)

Cui F, Mi H, Wang R et Al. The effect of chronic intermittent hypobaric hypoxia improving liver damage in metabolic syndrome rats through ferritinophagy Pflugers Arch 2023-10-13 [PMID: 37747537]

Lee J, Roh JL Promotion of ferroptosis in head and neck cancer with divalent metal transporter 1 inhibition or salinomycin Human cell 2023-03-08 [PMID: 36890422]

Xiong W, Jin L, Zhao Y et al. Deletion of Transferrin Receptor 1 in Parvalbumin Interneurons Induces a Hereditary Spastic Paraplegia-like Phenotype The Journal of neuroscience : the official journal of the Society for Neuroscience 2023-06-12 [PMID: 37308296]

Wang, K;Papadopoulos, N;Hamidi, A;Lennartsson, J;Heldin, CH; SUMOylation of PDGF receptor ? affects signaling via PLC? and STAT3, and cell proliferation BMC molecular and cell biology 2023-05-16 [PMID: 37193980]

Tang L, Zhang R, Wang Y Et al. A simple self-assembly nanomicelle based on brain tumor-targeting peptide-mediated siRNA delivery for glioma immunotherapy via intranasal administration Acta Biomater 2022-11-17 [PMID: 36384220] (ICC/IF, Mouse)

### Details:

Citation using the FITC version of this antibody.

Sohoni S, Ghosh P et al. Elevated Heme Synthesis and Uptake Underpin Intensified Oxidative Metabolism and Tumorigenic Functions in Non-Small Cell Lung Cancer Cells. Cancer Res 2019-05-15 [PMID: 30902795] (WB, Mouse)

Jhelum P, Santos-Nogueira E, Teo W et al. Ferroptosis mediates cuprizone-induced loss of oligodendrocytes and demyelination J Neurosci 2020-10-26 [PMID: 33106352]

Lee J, You JH, Shin D, Roh JL Inhibition of Glutaredoxin 5 predisposes Cisplatin-resistant Head and Neck Cancer Cells to Ferroptosis Theranostics 2020-06-19 [PMID: 32685019] (WB, Human)

Ghosh P, Guo Y, Ashrafi A et al. Oxygen-enhanced optoacoustic tomography reveals the effectiveness of targeting heme and oxidative phosphorylation at normalizing tumor vascular oxygenation Cancer Res. 2020-06-16 [PMID: 32546631] (IF/IHC, Human)

Lai TKY Protein-protein Interactions Provide a Platform for G-protein-coupled Receptors to Exert Physiological and Pathological Functions in Central Nervous System: Therapeutic Potential? Thesis

Lai TKY, Zhai D, Su P et al. The receptor-receptor interaction between mGluR1 receptor and NMDA receptor: a potential therapeutic target for protection against ischemic stroke FASEB J. 2019-10-31 [PMID: 31670972]

More publications at <http://www.novusbio.com/NB100-92243>



## Procedures

### Western Blot Protocol for TfR (Transferrin R) Antibody (NB100-92243)

#### Western Blot Protocol

1. Perform SDS-PAGE on samples to be analyzed, loading 10-25 ug of total protein per lane.
2. Transfer proteins to PVDF membrane according to the instructions provided by the manufacturer of the membrane and transfer apparatus.
3. Stain the membrane with Ponceau S (or similar product) to assess transfer success, and mark molecular weight standards where appropriate.
4. Rinse the blot TBS -0.05% Tween 20 (TBST).
5. Block the membrane in 5% Non-fat milk in TBST (blocking buffer) for at least 1 hour.
6. Wash the membrane in TBST three times for 10 minutes each.
7. Dilute primary antibody in blocking buffer and incubate overnight at 4C with gentle rocking.
8. Wash the membrane in TBST three times for 10 minutes each.
9. Incubate the membrane in diluted HRP conjugated secondary antibody in blocking buffer (as per manufacturer's instructions) for 1 hour at room temperature.
10. Wash the blot in TBST three times for 10 minutes each (this step can be repeated as required to reduce background).
11. Apply the detection reagent of choice in accordance with the manufacturers instructions

### Immunocytochemistry/Immunofluorescence Protocol for TfR (Transferrin R) Antibody (NB100-92243)

#### Immunocytochemistry Protocol

Culture cells to appropriate density in 35 mm culture dishes or 6-well plates.

1. Remove culture medium and wash the cells briefly in PBS. Add 10% formalin to the dish and fix at room temperature for 10 minutes.
2. Remove the formalin and wash the cells in PBS.
3. Permeablize the cells with 0.1% Triton X100 or other suitable detergent for 10 min.
4. Remove the permeabilization buffer and wash three times for 10 minutes each in PBS. Be sure to not let the specimen dry out.
5. To block nonspecific antibody binding, incubate in 10% normal goat serum from 1 hour to overnight at room temperature.
6. Add primary antibody at appropriate dilution and incubate overnight at 4C.
7. Remove primary antibody and replace with PBS. Wash three times for 10 minutes each.
8. Add secondary antibody at appropriate dilution. Incubate for 1 hour at room temperature.
9. Remove secondary antibody and replace with PBS. Wash three times for 10 minutes each.
10. Counter stain DNA with DAPI if required.



**Immunohistochemistry-Paraffin Protocol for TfR (Transferrin R) Antibody (NB100-92243)**

## Immunohistochemistry-Paraffin Embedded Sections

## Antigen Unmasking:

Bring slides to a boil in 10 mM sodium citrate buffer (pH 6.0) then maintain at a sub-boiling temperature for 10 minutes. Cool slides on bench-top for 30 minutes (keep slides in the sodium citrate buffer at all times).

## Staining:

1. Wash sections in deionized water three times for 5 minutes each.
2. Wash sections in PBS for 5 minutes.
3. Block each section with 100-400 ul blocking solution (1% BSA in PBS) for 1 hour at room temperature.
4. Remove blocking solution and add 100-400 ul diluted primary antibody. Incubate overnight at 4 C.
5. Remove antibody solution and wash sections in wash buffer three times for 5 minutes each.
6. Add 100-400 ul HRP polymer conjugated secondary antibody. Incubate 30 minutes at room temperature.
7. Wash sections three times in wash buffer for 5 minutes each.
8. Add 100-400 ul DAB substrate to each section and monitor staining closely.
9. As soon as the sections develop, immerse slides in deionized water.
10. Counterstain sections in hematoxylin.
11. Wash sections in deionized water two times for 5 minutes each.
12. Dehydrate sections.
13. Mount coverslips.





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### **Products Related to NB100-92243**

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NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control

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### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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