Datasheet for 200-901-FM9

Transthyretin Antibody

Overview

Description:	Anti-Transthyretin (CHICKEN) Antibody - 200-901-FM9
Item No.:	200-901-FM9
Size:	100 µg
Applications:	ELISA, IF, IHC, WB
Reactivity:	Human, Mouse, Rat
Host Species:	Chicken

Product Details

Background:	Transthyretin is a tetrameric carrier protein that transports thyroid hormones in the plasma and cerebrospinal fluid, and retinol (vitamin A) in the plasma. More than 80 different mutations in this gene have been reported; most mutations are related to amyloid deposition, affecting predominantly peripheral nerve and/or the heart. The diseases caused by mutations include familial amyloidotic polyneuropathy, euthyroid hyperthyroxinemia, amyloidotic vitreous opacities, cardiomyopathy, oculoleptomeningeal amyloidosis, meningocerebrovascular amyloidosis, and carpal tunnel syndrome. It has also been suggested that Transthyretin plays an important role in the maintenance of normal cognitive processes during aging, neuropeptide processing and nerve regeneration. It has also been linked to several pathological conditions including Parkinson's disease, schizophrenia, and depression.
Synonyms:	Transthyretin Antibody, CTS, CTS1, PALB, TBPA, HEL111, HsT2651, Transthyretin, ATTR
Host Species:	Chicken
Clonality:	Polyclonal
Format:	IgY

Target Details

Gene Name:	TTR
Reactivity:	Human, Mouse, Rat
Immunogen Type:	Conjugated Peptide

Immunogen:	Anti-Transthyretin antibody was prepared from chicken egg fractions produced by repeated immunizations with a 17 amino acid synthetic peptide near the internal region of human Transthyretin.
Purity/Specificity:	Anti-Transthyretin Antibody is an IgY fraction that has been affinity purified by immunoaffinity purification. Cross reactivity with Transthyretin from other sources has not been determined.
Relevant Links:	• UniProtKB - P02766 • GeneID - 7276 • NCBI - NP_000362.1

Application Details

Tested Applications:	ELISA, IF, IHC, WB
Application Note:	Anti-Transthyretin Antibody has been tested for use in ELISA, Western Blotting, Immunohistochemistry and Immunofluorescence. Specific conditions for reactivity should be optimized by the end user. Expect a band at approximately 16 kDa in Western Blots of specific cell lysates and tissues.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:10,000-1:20,000
IF:	20 µg/mL
IHC:	2.5 µg/mL
WB:	1-2 µg/mL

Formulation

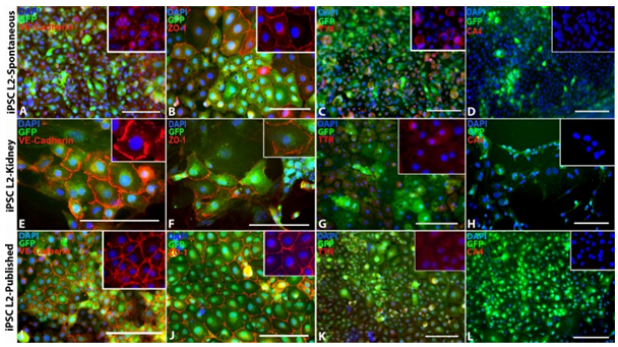
Physical State:	Liquid (sterile filtered)
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.01 M Sodium Phosphate, 0.25 M Sodium Chloride, pH 7.2
Preservative:	0.02% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

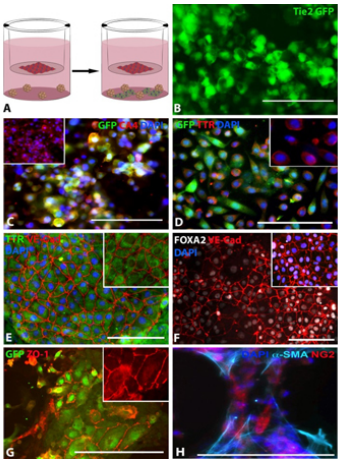
Shipping Condition:	Wet Ice

Storage Condition:	Antibody can be stored at 4°C up to one year. Antibodies should not be exposed to prolonged high temperatures.
Expiration:	Expiration date is one (1) year from date of receipt.

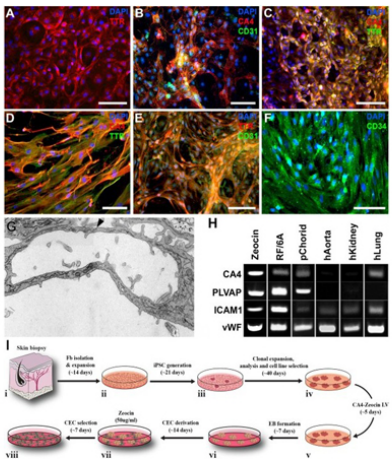
Images



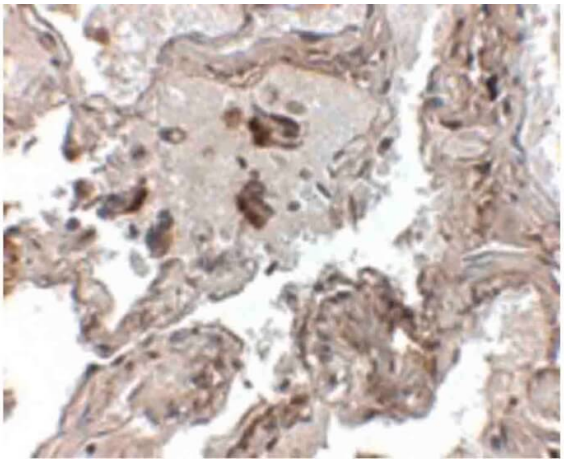
Immunohistochemistry
Spontaneous iPSC-EC differentiation, kidney coculture iPSC-EC differentiation, and previously published iPSC- EC differentiation protocol. (A–D) Spontaneously differentiated iPSC-derived ECs express EC markers (A) VE-Cadherin and (B) ZO-1, a small amount of (C) TTR, but no (D) CA4. (E–H) iPSC-derived ECs differentiated in coculture with primary mouse kidney ECs also express (E) VE-Cadherin, (F) ZO-1, and (G) TTR, but not (H) CA4. (I–L) Likewise, iPSC-derived ECs differentiated using a previously published iPSC-EC differentiation protocol from Rufaihah et al.18 also express (I) VE-Cadherin, (J) ZO-1, and (K) TTR, but not (L) CA4. DAPI = blue. Scale bars: 100 µm.
Fig 2. PMID: 26720480



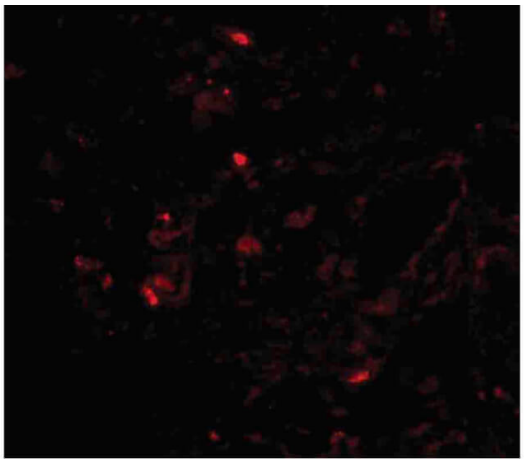
Immunohistochemistry
Differentiating choroidal-like ECs via co-culture with RF6A CECs. (A) Schematic illustrating differentiation paradigm: red cells = RF6A CECs, green cells = differentiated iPSC-ECs. (B) GFP expression in live iPSC-L2-RF6A ECs. (C) Carbonic anhydrase IV (CA4; red), GFP (green), and DAPI (blue) expression in iPSC-L2-RF/6A ECs; inset of only CA4 and DAPI expression. (D) GFP (green), TTR (red), and DAPI (blue) expression in iPSC-L2-RF/6A ECs, inset of only TTR and DAPI expression. (E) TTR (green), VE-Cadherin (red), and DAPI (blue) expression in iPSC-L2-RF/6A ECs; inset of only TTR and VE-Cadherin expression; pseudocoloring performed using Fiji. (F) Green fluorescent protein (green) and ZO-1 (red) expression in iPSC-L2-RF/6A ECs; inset of only ZO-1 expression. (G) FOXA2 (gray), VE-Cadherin (red), and DAPI (blue) expression in iPSC-L2-RF/6A ECs; pseudocoloring performed using Fiji. (H) α-SMA (cyan), NG-2 (red), and DAPI expression in iPSC-L2-RF/6A pericytes; pseudocoloring performed using Fiji. Scale bars: 100 µm. Fig 3.
PMID: 26720480



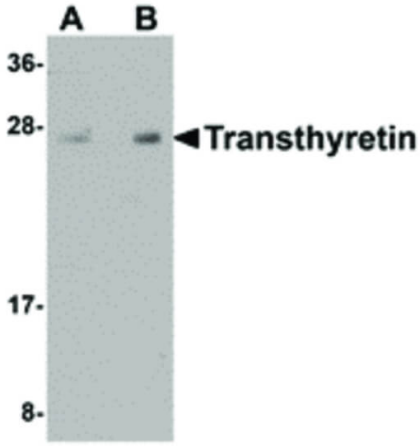
Immunohistochemistry
Characterization and selection of iPSC derived CEC-like cells. (A–C): Immunocytochemical analysis of iPSC derived CEC-like cells using antibodies targeted against TTR (A, C) CA4 (B, C) and CD31 (B) pre-Zeocin selection. (D–F): Immunocytochemical analysis of iPSC derived CEC-like cells using antibodies targeted against TTR (D, E) CA4 (D), CD31 (E) and CD34 (F) post-Zeocin selection. (G): Transmission electron microscopy analysis of a Zeocin-treated iPSC derived CEC-like capillary tube. (F): Expression of EC- and CEC-specific markers by Zeocin-selected cells and controls, as detected via rt-PCR. (H): Rt-PCR analysis demonstrating expression of the endothelial cell markers CA4, PLVAP, ICAM1, and vWF. (I): Schematic diagram illustrating the steps and timeline required from generating patient specific iPSCs to derivation of Zeocin selected CEC-like cells. All scale bars represent 100 µm. Abbreviations: CEC, choroidal endothelial cell; DAPI, 4',6-diamidino-2-phenylindole; EB, embryoid body; iPSC, induced pluripotent stem cell; TTR, transthyretin. Fig 4. PMID: 28474838



Immunohistochemistry
Immunohistochemistry of Transthyretin antibody. Tissue: human lung tissue. Fixation: formalin fixed paraffin embedded. Antigen retrieval: not required. Primary antibody: Transthyretin antibody at 2.5 µg/mL for 1 h at RT. Secondary antibody: Peroxidase chicken secondary antibody at 1:10,000 for 45 min at RT. Localization: Transthyretin is nuclear. Staining: Transthyretin as precipitated light brown signal with brown nuclear counterstain.



Immunofluorescence Microscopy
Immunofluorescence Microscopy of Transthyretin antibody. Tissue: human lung tissue. Fixation: 0.5% PFA. Antigen retrieval: not required. Primary antibody: Transthyretin antibody at 20 µg/mL for 1 h at RT. Secondary antibody: Fluorescein chicken secondary antibody at 1:10,000 for 45 min at RT. Localization: Transthyretin is nuclear. Staining: Transthyretin as red fluorescent signal.



Western Blot
Western Blot of Transthyretin antibody. Lane 1: Human lung tissue lysate with Transthyretin antibody at 1 µg/mL. Lane 2: Human lung tissue lysate with Transthyretin antibody at 2 µg/mL. Load: 35 µg per lane. Secondary antibody: Peroxidase chicken secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: 16 kDa, 25 kDa for Transthyretin. Other band(s): Transthyretin splice variants and isoforms.

References

- Songstad et al. Connective Tissue Growth Factor Promotes Efficient Generation of Human Induced Pluripotent Stem Cell-Derived Choroidal Endothelium. *STEM CELLS Translational Medicine* (2017)
- Songstad et al. Generating iPSC-Derived Choroidal Endothelial Cells to Study Age-Related Macular Degeneration. *Investigative Ophthalmology & Visual Science* (2015)

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