Data Sheet (Cat.No.TMAY-01434)

Anti-Angiotensinogen Antibody (8W147)

Product Details

Ig Type:	Rabbit IgG
Reactivity:	Human
Conjugation:	Unconjugated
Clone:	8W147
Purification:	Protein A

Applications

Verified Activity:	1. Immunofluorescence staining of Human AGT in Hela or SKBR3 cells. Cells were fixed with 4% PFA, permeabilzed with 1% Triton X-100 in PBS, blocked with 10% serum, and incubated with Rabbit anti-Human AGT monoclonal antibody (1:60). Then cells were stained with the Alexa Fluor® 488-conjugated Goat Anti-rabbit IgG secondary antibody (left panel, captured by laser confocal scanning microscope; right panel, captured by fluorescence microscope), countstained with DAPI (blue). Positive staining was localized to cytoplasm. 2. Anti-SerpinA8 rabbit monoclonal antibody at 1:500 dilution. -Lane A: HepG2 Whole Cell lysate. -Lysates/proteins at 30 µg per lane. -Secondary -Goat Anti-Rabbit IgG H&L (Dylight800) at 1/10000 dilution. -Developed using the Odyssey technique. -Performed under reducing conditions. -Predicted band size:53 kDa. -Observed band size:53 kDa. 3. SerpinA8 was immunoprecipitated using: -Lane A:0.5 mg HepG2 Whole Cell Lysate. -2 µL anti-SerpinA8 rabbit monoclonal antibody and 15 µl of 50 % Protein G agarose. -Primary antibody: -Anti-SerpinA8 rabbit monoclonal antibody, at 1:200 dilution. -Secondary antibody: -Clean-Blotô IP Detection Reagent (HRP) at 1:500 dilution. -Developed using the DAB staining technique. -Performed under reducing conditions. -Predicted band size: 51 kDa. -Observed band size: 51 kDa. 4. Flow cytometric analysis of Human AGT expression on HepG2 cells. The cells were treated according to manufacturer's manual (BD Pharmingen™ Cat. No. 554714), stained with purified anti-Human AGT, then a FITC-conjugated second step antibody. The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of intact cells.

Application:	ELISA,FCM,ICC/IF,IP,WB
Recommended	WB: 1:500-1:2000; ELISA: 1:5000-1:10000; ICC-IF: 1:20-1:100; FCM: 1:25-1:100; IP: 4-6 μL/mg of lysate

Properties

Stability & Storage:	Store at 2°C-8°C for 1 month. Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles. Preservative-Free.
Shipping:	Shipping with blue ice.

Antigen Details

Immunogen:	Recombinant Protein: Human SerpinA8 protein (TMPY-01232)
Antigen Species:	Human
Synonyms:	angiotensinogen (serpin peptidase inhibitor, clade A, member 8)
Biology Area:	Serine Proteases and Regulators

Research Background

Angiotensinogen, also known as AGT and SerpinA8, is a member of the serpin family. It is an α-2-globulin that is produced constitutively and released into the circulation mainly by the liver. Angiotensinogen is a essential component of the renin-angiotensin system (RAS) and a potent regulator of blood pressure. Angiotensinogen can be schematically considered to consist of a combination of an angiotensin I (Ang I) function, located at the N-terminal end, and the presence of a serpin (serine protease inhibitor) structure at the opposite end. Angiotensinogen is cleaved into three chains: Angiotensin-1 (Ang I), Angiotensin-2 (Ang II), and Angiotensin-3 (Ang III). Angiotensin-1 is a substrate of ACE (angiotensin converting enzyme) that removes a dipeptide to yield the physiologically active peptide angiotensin-2. Angiotensin-1 and angiotensin-2 can be further processed to generate angiotensin-3, angiotensin-4. Angiotensin 1-7 is cleaved from angiotensin-2 by ACE2. Angiotensin-2 acts directly on vascular smooth muscle as a potent vasoconstrictor, affects cardiac contractility and heart rate through its action on the sympathetic nervous system. Defects in AGT are associated with susceptibility to essential hypertension and renal tubular dysgenesis (RTD). Several serpins (antithrombin, maspin, pigment epithelial-derived factor, and kallistatin) have been recently shown to exert an antiangiogenic activity, suggesting a common mechanism of endothelial cell proliferation and migration. Angiotensinogen/AGT and its renin-cleaved product, des(Ang I)AGT, are also angiogenesis inhibitors, both in vitro and in vivo at concentrations within the range of those observed in plasma. The Angiotensinogen products, that is angiotensin II and possibly angiotensin II-related products, have been found to act locally in modulating adipose tissue growth in an autocrine/paracrine manner. The transient or chronic overexpression of angiotensinogen in adipose tissue favors lipogenesis in adipocytes and leads to a 'vicious' circle whereby adipose tissue development is further increased.

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