Data Sheet (Cat.No.TMAY-01435)

TargetMol

Anti-Angiotensinogen Antibody (4R806)

Product Details

Ig Type:	Rabbit IgG
Reactivity:	Human
Conjugation:	Unconjugated
Clone:	4R806
Purification:	Protein A

Applications

Verified Activity:	1. Immunochemical staining of human AGT in human cirrhosis with rabbit monoclonal antibody (1:200, formalin-fixed paraffin embedded sections). Positive staining was localized to hepatocyte. 2. Immunochemical staining of human AGT in human brain with rabbit monoclonal antibody (1:200, formalin-fixed paraffin embedded sections). Positive staining was localized to nerve cell.
Application:	IHC-P
Recommended	IHC-P: 1:100-1:500

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 / Angiotensinogen / AGT 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

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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