AGT Peptide - C-Terminal Region Blocking Peptide

PRODUCT OVERVIEW

Product Name	AGT, Blocking Peptide
Full Product Name	AGT Peptide - C-terminal region
Product Gene Name	AGT blocking peptide
Product Synonym Gene Name	ANHU; hFLT1; SERPINA8
Sequence	Synthetic peptide located within the following region: FELEADEREP TESTQQLNKP EVLEVTLNRP FLFAVYDQSA TALHFLGRVA
Species Reactivity	Human
Form/Format	Lyophilized powder
Preparation and Storage	Add 100ul of sterile PBS. Final peptide concentration is 1 mg/ml in PBS. For longer periods of storage, store at -20 degree C. Avoid repeat freeze-thaw cycles.
Antibody/Peptide Pairs	AGT peptide (MBS3247771) is used for blocking the activity of AGT antibody (MBS3223124)
Molecular Weight	53 kDa
OMIM	106150
Product Categories/Family for AGT blocking peptide	Peptide
Related Product Information for AGT blocking peptide	This is a synthetic peptide designed for use in combination with anti- AGT Antibody, made Target Description: The protein encoded by this gene, pre-angiotensinogen or angiotensinogen precursor, is expressed in the liver and is cleaved by the enzyme renin in response to lowered blood pressure. The resulting product, angiotensin I, is then cleaved by angiotensin converting enzyme (ACE) to generate the physiologically active enzyme angiotensin II. The protein is involved in maintaining blood pressure and in the pathogenesis of essential hypertension and preeclampsia. Mutations in this gene are associated with susceptibility to essential hypertension, and can cause renal tubular dysgenesis, a severe disorder of renal tubular development. Defects in this gene have also been associated with non-familial structural atrial fibrillation, and inflammatory bowel disease.
Other Notes	Small volumes of AGT blocking peptide vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for AGT purchase	MBS3247771 is a blocking peptide targeting AGT. Also known as AGT Peptide - C-terminal region. Reactive in Human.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for AGT. It may not necessarily be applicable to this product.

NCBI GI #	4557287
NCBI GeneID	183
NCBI Accession #	NP_000020.1
UniProt Primary Accession #	P01019
UniProt Related Accession #	P01019
GenBank Nucleotide #	NM_000029.3

NCBI Official Full Name	angiotensinogen preproprotein
NCBI Official Synonym Full Names	angiotensinogen
NCBI Official Symbol	AGT
NCBI Official Synonym Symbols	ANHU; hFLT1; SERPINA8
UniProt Protein Name	Angiotensinogen
UniProt Synonym Protein Names	Serpin A8Cleaved into the following 8 chains:Angiotensin-1; Alternative name(s):; Angiotensin 1-10; Angiotensin I; Ang IAngiotensin-2; Alternative name(s):; Angiotensin 1-8; Angiotensin II; Ang IIAngiotensin-3; Alternative name(s):; Angiotensin 2-8; Angiotensin III; Ang III; Des-Asp[1]-angiotensin IIAngiotensin-4; Alternative name(s):; Angiotensin 3-8; Angiotensin IV
Protein Family	Angiotensinogen
UniProt Gene Name	AGT
UniProt Synonym Gene Names	SERPINA8; Ang I; Ang II; Ang III; Ang IV
UniProt Entry Name	ANGT_HUMAN
NCBI Protein Information	angiotensinogen
NCBI Summary for AGT	The protein encoded by this gene, pre-angiotensinogen or angiotensinogen precursor, is expressed in the liver and is cleaved by the enzyme renin in response to lowered blood pressure. The resulting product, angiotensin I, is then cleaved by angiotensin converting enzyme (ACE) to generate the physiologically active enzyme angiotensin II. The protein is involved in maintaining blood pressure and in the pathogenesis of essential hypertension and preeclampsia. Mutations in this gene are associated with susceptibility to essential hypertension, and can cause renal tubular dysgenesis, a severe disorder of renal tubular development. Defects in this gene have also been associated with non-familial structural atrial fibrillation, and inflammatory bowel disease. [provided by RefSeq, Jul 2008]

UniProt Comments for AGT	angiotensin: Essential component of the renin-angiotensin system (RAS), a potent regulator of blood pressure, body fluid and electrolyte homeostasis. In response to lowered blood pressure, the enzyme renin cleaves angiotensinogen to produce angiotensin-1 (angiotensin 1-10). Angiotensin-1 is a substrate of ACE (angiotensin converting enzyme) that removes a dipeptide to yield the physiologically active peptide angiotensin-2 (angiotensin 1- 8). Angiotensin-1 and angiotensin-2 can be further processed to generate angiotensin-3 (angiotensin 2-8), angiotensin-4 (angiotensin 3-8). Angiotensin 1-7 is cleaved from angiotensin-2 by ACE2 or from angiotensin-1 by MME (neprilysin). Angiotensin 1-9 is cleaved from angiotensin-1 by ACE2. Genetic variations in AGT are a cause of susceptibility to essential hypertension (EHT). Essential hypertension is a condition in which blood pressure is consistently higher than normal with no identifiable cause. Defects in AGT are a cause of renal tubular dysgenesis (RTD). RTD is an autosomal recessive severe disorder of renal tubular development characterized by persistent fetal anuria and perinatal death, probably due to pulmonary hypoplasia from early-onset oligohydramnios (the Potter phenotype). Belongs to the serpin family. Protein type: Secreted; Secreted, signal peptide Chromosomal Location of Human Ortholog: 1q42.2 Cellular Component: extracellular space; cytoplasm; extracellular region Molecular Function: serine-type endopeptidase inhibitor activity; protein binding; sodium channel regulator activity; growth factor activity; hormone activity; superoxide-generating NADPH oxidase activator activity; type 2 angiotensin receptor binding; type 1 angiotensin receptor binding Biological Process: renal system process; extracellular matrix organization and biogenesis; positive regulation of nitric oxide biosynthetic process; establishment of blood-nerve barrier; negative regulation of nerve growth factor receptor signaling pathway; positive regulation of transcription, DNA-dependent; stress-activated MAPK cascade; female pregnancy; positive regulation of multicellular organism growth; positive regulation of vasodilation; activation of NF-kappaB transcription factor; ovarian follicle rupture; positive regulation of fibroblast proliferation; cell-cell signaling; positive regulation of superoxide release; negative regulation of neuron apoptosis; kidney development; positive regulation of NAD(P)H oxidase activity; positive regulation of cytokine production; angiotensin mediated regulation of renal output; regulation of calcium ion transport; response to muscle activity involved in regulation of muscle adaptation; regulation of norepinephrine secretion; negative regulation of tissue remodeling; positive regulation of phosphoinositide 3-kinase cascade; positive regulation of peptidyl-tyrosine phosphorylation; angiotensin mediated vasoconstriction involved in regulation of systemic arterial blood pressure; phospholipase C activation; regulation of transmission of nerve impulse; regulation of vasoconstriction; smooth muscle cell differentiation; G-protein signaling, coupled to IP3 second messenger (phospholipase C activating); nitric oxide mediated signal transduction; cytokine secretion; regulation of long-term neuronal synaptic plasticity; peristalsis; cell-matrix adhesion; renin-angiotensin regulation of aldosterone production; positive regulation of cellular protein metabolic process; smooth muscle cell proliferation; cellular lipid metabolic process; angiotensin maturation; excretion; vasodilation; response to salt stress; negative regulation of cell proliferation; fibroblast proliferation; positive regulation of MAPKKK cascade; renin-angiotensin regulation of blood vessel size; positive regulation of epidermal growth factor receptor signaling pathway; regulation of blood pressure; renin-angiotensin regulation of blood volume; regulation of cell growth; angiotensin mediated drinking behavior; artery smooth muscle contraction; aging; positive regulation of fatty acid biosynthetic process; blood vessel development; cellular sodium ion homeostasis; renal response to blood flow during renin-angiotensin regulation of systemic arterial blood pressure; activation of NF-kappaB-inducing kinase; positive regulation of organ growth; positive regulation of peptidyl-serine phosphorylation; regulation of cell proliferation; G-protein coupled receptor protein signaling pathway; negative regulation of angiogenesis; cellular protein metabolic process; ureteric bud branching; G-protein signaling, coupled to cGMP nucleotide second messenger; blood vessel remodeling; negative regulation of cell growth; response to cold; astrocyte activation; positive regulation of inflammatory response Disease: Renal Tubular Dysgenesis; Hypertension, Essential
Research Articles on AGT	**1.** The possible contribution of the I/D in the ACE gene, M235T and T174M in the angiotensinogen (AGT) gene polymorphisms with ischemic stroke in young Mexican population.
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