

Polyclonal Antibody to Angiotensin I Converting Enzyme (ACE)

Angiotensin I Converting Enzyme
Catalog # AP74512

Product Information

Application	WB
Primary Accession	F1RRW5
Reactivity	Pig
Host	Rabbit
Clonality	Polyclonal
Calculated MW	150312

Additional Information

Other Names	CD143; ACE1; DCP1; ACEI; ACE-I; Kininase II; Angiotensin-Converting Enzyme; Peptidyl-Dipeptidase A; Dipeptidyl Carboxypeptidase 1; Angiotensin-converting enzyme, soluble form
Target/Specificity	Sus scrofa; Porcine (Pig)
Dilution	WB~~Western blotting: 0.2-2 μ g/mL;1:250-2500 Immunohistochemistry: 5-20 μ g/mL;1:25-100 Immunocytochemistry: 5-20 μ g/mL;1:25-100 Optimal working dilutions must be determined by end user.
Format	PBS, pH7.4, containing 0.02% NaN ₃ , 50% glycerol.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	ACE {ECO:0000250 UniProtKB:P12821}
Function	Dipeptidyl carboxypeptidase that removes dipeptides from the C-terminus of a variety of circulating hormones, such as angiotensin I, bradykinin or enkephalins, thereby playing a key role in the regulation of blood pressure, electrolyte homeostasis or synaptic plasticity (By similarity). Composed of two similar catalytic domains, each possessing a functional active site, with different selectivity for substrates (By similarity). Plays a major role in the angiotensin-renin system that regulates blood pressure and sodium retention by the kidney by converting angiotensin I to angiotensin II, resulting in an increase of the vasoconstrictor activity of angiotensin (By similarity). Also able to inactivate bradykinin, a potent vasodilator, and therefore enhance the blood pressure response (PubMed: 4962200). Acts as a regulator of synaptic

transmission by mediating cleavage of neuropeptide hormones, such as substance P, neurotensin or enkephalins (By similarity). Catalyzes degradation of different enkephalin neuropeptides (Met- enkephalin, Leu-enkephalin, Met-enkephalin-Arg-Phe and possibly Met- enkephalin-Arg-Gly-Leu) (By similarity). Acts as a regulator of synaptic plasticity in the nucleus accumbens of the brain by mediating cleavage of Met-enkephalin-Arg-Phe, a strong ligand of Mu-type opioid receptor OPRM1, into Met-enkephalin (By similarity). Met-enkephalin- Arg-Phe cleavage by ACE decreases activation of OPRM1, leading to long- term synaptic potentiation of glutamate release (By similarity). Also acts as a regulator of hematopoietic stem cell differentiation by mediating degradation of hemoregulatory peptide N-acetyl-SDKP (AcSDKP) (By similarity). Acts as a regulator of cannabinoid signaling pathway by mediating degradation of hemopressin, an antagonist peptide of the cannabinoid receptor CNR1 (By similarity). Involved in amyloid-beta metabolism by catalyzing degradation of Amyloid-beta protein 40 and Amyloid-beta protein 42 peptides, thereby preventing plaque formation (By similarity). Catalyzes cleavage of cholecystokinin (maturation of Cholecystokinin-8 and Cholecystokinin-5) and Gonadoliberin-1 (both maturation and degradation) hormones (By similarity). Degradation of hemoregulatory peptide N-acetyl-SDKP (AcSDKP) and amyloid-beta proteins is mediated by the N-terminal catalytic domain, while angiotensin I and cholecystokinin cleavage is mediated by the C-terminal catalytic region (By similarity).

Cellular Location

Cell membrane {ECO:0000250|UniProtKB:P12821}; Single-pass type I membrane protein. Cytoplasm {ECO:0000250|UniProtKB:P09470}. Note=Detected in both cell membrane and cytoplasm in neurons. {ECO:0000250|UniProtKB:P09470}

Images

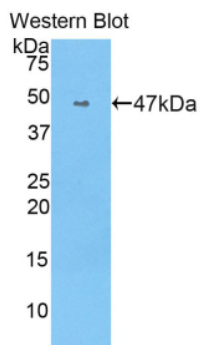


Figure. Western Blot; Sample: Recombinant ACE, Porcine.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.