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Product datasheet for SC329073

Angiotensin Converting Enzyme 1 (ACE) (NM_001178057) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Angiotensin Converting Enzyme 1 (ACE) (NM_001178057) Human Untagged Clone
Tag:	Tag Free
Symbol:	Angiotensin Converting Enzyme 1
Synonyms:	ACE1; CD143; DCP; DCP1
Mammalian Cell Selection:	None
Vector:	pCMV6-XL5
E. coli Selection:	Ampicillin (100 ug/mL)

View online »

Fully Sequenced ORF:

>NCBI ORF sequence for NM_001178057, the custom clone sequence may differ by one or more nucleotides

ATGGGCCAGGGTTGGGCTACTGCAGGACTTCCCAGCCTCCTCTTCCTGCTGCTCTGCTAC
GGGCACCCTCTGCTGGTCCCCAGCCAGGAGGCATCCCAACAGGTGACAGTCACCCATGGG
ACAAGCAGCCAGGCAACAACCAGCAGCCAGACAACCACCCACCAGGCGACGGCCCACCAG
ACATCAGCCCAGAGCCCAAACCTGGTGACTGATGAGGCTGAGGCCAGCAAGTTTGTGGAG
GAATATGACCGGACATCCCAGGTGGTGTGGAACGAGTATGCCGAGGCCAACTGGAACTAC
AACACCAACATCACCACAGAGACCAGCAAGATTCTGCTGCAGAAGAACATGCAAATAGCC
AACCACACCCTGAAGTACGGCACCCAGGCCAGGAAGTTTGATGTGAACCAGTTGCAGAAC
ACCACTATCAAGCGGATCATAAAGAAGGTTCAGGACCTAGAACGGGCAGCACTGCCTGCC
CAGGAGCTGGAGGAGTACAACAAGATCCTGTTGGATATGGAAACCACCTACAGCGTGGCC
ACTGTGTGCCACCCGAATGGCAGCTGCCTGCAGCTCGAGCCAGATCTGACGAATGTGATG
GCCACGTCCCGGAAATATGAAGACCTGTTATGGGCATGGGAGGGCTGGCGAGACAAGGCG
GGGAGAGCCATCCTCCAGTTTTACCCGAAATACGTGGAACTCATCAACCAGGCTGCCCGG
CTCAATGGCTATGTAGATGCAGGGGACTCGTGGAGGTCTATGTACGAGACACCATCCCTG
GAGCAAGACCTGGAGCGGCTCTTCCAGGAGCTGCAGCCACTCTACCTCAACCTGCATGCC
TACGTGCGCCGGGCCCTGCACCGTCACTACGGGGCCCAGCACATCAACCTGGAGGGGCCC
ATTCCTGCTCACCTGCTGGGGAACATGTGGGCGCAGACCTGGTCCAACATCTATGACTTG
GTGGTGCCCTTCCCTTCAGCCCCCTCGATGGACACCACAGAGGCTATGCTAAAGCAGGGC
TGGACGCCCAGGAGGATGTTTAAGGAGGCTGATGATTTCTTCACCTCCCTGGGGCTGCTG
CCCGTGCCTCCTGAGTTCTGGAACAAGTCGATGCTGGAGAAGCCAACCGACGGGCGGGAG
GTGGTCTGCCACGCCTCGGCCTGGGACTTCTACAACGGCAAGGACTTCCGGATCAAGCAG
TGCACCACCGTGAACTTGGAGGACCTGGTGGTGGCCCACCACGAAATGGGCCACATCCAG
TATTTCATGCAGTACAAAGACTTACCTGTGGCCTTGAGGGAGGGTGCCAACCCCGGCTTC
CATGAGGCCATTGGGGACGTGCTAGCCCTCTCAGTGTCTACGCCCAAGCACCTGCACAGT
CTCAACCTGCTGAGCAGTGAGGGTGGCAGCGACGAGCATGACATCAACTTTCTGATGAAG
ATGGCCCTTGACAAGATCGCCTTTATCCCCTTCAGCTACCTCGTCGATCAGTGGCGCTGG
AGGGTATTTGATGGAAGCATCACCAAGGAGAACTATAACCAGGAGTGGTGGAGCCTCAGG
CTGAAGTACCAGGGCCTCTGCCCCCCAGTGCCCAGGACTCAAGGTGACTTTGACCCAGGG
GCCAAGTTCCACATTCCTTCTAGCGTGCCTTACATCAGGACCGCCATGAAGCTGGGCTTC
AGTAGGCCGTGGCCGGAAGCCATGCAGCTGATCACGGGCCAGCCCAACATGAGCGCCTCG
GCCATGTTGAGCTACTTCAAGCCGCTGCTGGACTGGCTCCGCACGGAGAACGAGCTGCAT
GGGGAGAAGCTGGGCTGGCCGCAGTACAACTGGACGCCGAACTCCGCTCGCTCAGAAGGG
CCCCTCCCAGACAGCGGCCGCGTCAGCTTCCTGGGCCTGGACCTGGATGCGCAGCAGGCC
CGCGTGGGCCAGTGGCTGCTGCTCTTCCTGGGCATCGCCCTGCTGGTAGCCACCCTGGGC
CTCAGCCAGCGGCTCTTCAGCATCCGCCACCGCAGCCTCCACCGGCACTCCCACGGGCCC
CAGTTCGGCTCCGAGGTGGAGCTGAGACACTCCTGA

Restriction Sites: Please inquire

ACCN: NM_001178057

OTI Disclaimer: Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

OTI Annotation: This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.

Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	1. Centrifuge at 5,000xg for 5min. 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA. 3. Close the tube and incubate for 10 minutes at room temperature. 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom. 5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
RefSeq:	NM_001178057.1, NP_001171528.1
RefSeq Size:	3141 bp
RefSeq ORF:	2076 bp
Locus ID:	1636
UniProt ID:	P12821
Cytogenetics:	17q23.3
Protein Families:	Druggable Genome, ES Cell Differentiation/IPS, Protease, Secreted Protein, Transmembrane
Protein Pathways:	Hypertrophic cardiomyopathy (HCM), Renin-angiotensin system
Gene Summary:	This gene encodes an enzyme involved in blood pressure regulation and electrolyte balance. It catalyzes the conversion of angiotensin I into a physiologically active peptide angiotensin II. Angiotensin II is a potent vasopressor and aldosterone-stimulating peptide that controls blood pressure and fluid-electrolyte balance. This angiotensin converting enzyme (ACE) also inactivates the vasodilator protein, bradykinin. Accordingly, the encoded enzyme increases blood pressure and is a drug target of ACE inhibitors, which are often prescribed to reduce blood pressure. This enzyme additionally plays a role in fertility through its ability to cleave and release GPI-anchored membrane proteins in spermatozoa. Many studies have associated the presence or absence of a 287 bp Alu repeat element in this gene with the levels of circulating enzyme. This polymorphism, as well as mutations in this gene, have been implicated in a wide variety of diseases including cardiovascular pathophysiologies, psoriasis, renal disease, stroke, and Alzheimer's disease. Regulation of the homologous ACE2 gene may be involved in progression of disease caused by several human coronaviruses, including SARS-CoV and SARS-CoV-2. Alternative splicing results in multiple transcript variants encoding both somatic (sACE) and male-specific testicular (tACE) isoforms. [provided by RefSeq, Sep 2020] Transcript Variant: This variant (3) lacks multiple 5' exons and an in-frame exon in the 3' region, but has an alternate 5' exon, compared to variant 1. The resulting isoform (3) is shorter, and has a distinct N-terminus and lacks an internal segment, compared to isoform 1. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.