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**Lab Dept:** Chemistry

**Test Name:** ANGIOTENSIN CONVERTING ENZYME

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***General Information***

**Lab Order Codes:** ANGI

**Synonyms:** ACE; Kinase II; Peptidylpeptide Hydrolase; Sarcoidosis; SACE

**CPT Codes:** 82164 – Angiotensin I - converting enzyme (ACE)

**Test Includes:** Angiotensin converting enzyme concentration reported in U/L.

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***Logistics***

**Test Indications:** An evaluation of patients with suspected sarcoidosis. An elevation in the level of serum angiotensin converting enzyme (ACE), along with radiographic evidence of infiltrates and/or adenopathy and organ biopsies showing non-caseating epithelial granulomas, is suggestive of a diagnosis of sarcoidosis. ACE can also be dramatically elevated in Gaucher's disease and some other processes.

**Lab Testing Sections:** Chemistry - Sendouts

**Referred to:** Mayo Medical Laboratories (MML Test: ACE)

**Phone Numbers:** MIN Lab: 612-813-6280

STP Lab: 651-220-6550

**Test Availability:** Daily, 24 hours

**Turnaround Time:** 1 - 3 days; test set up Monday - Saturday

**Special Instructions:** The use of angiotensin converting enzyme (ACE)-inhibiting antihypertensive drugs will cause decreased ACE values.

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***Specimen***

**Specimen Type:** Blood

**Container:** SST (Gold, marble or red) tube

**Draw Volume:** 3 mL (Minimum: 1.5 mL) blood

**Processed Volume:** 1 mL (Minimum: 0.5 mL) serum

<b>Collection:</b>	Routine venipuncture
<b>Special Processing:</b>	Lab Staff: Centrifuge specimen, remove serum aliquot into a screw-capped round bottom plastic vial. Store and ship at refrigerated temperatures. Forward promptly.
<b>Patient Preparation:</b>	None
<b>Sample Rejection:</b>	Specimens other than serum; mislabeled or unlabeled specimens; gross hemolysis; gross lipemia; grossly icteric

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### ***Interpretive***

<b>Reference Range:</b>	>or = 18 yrs: 8 – 53 U/L  Note: The reference interval for pediatric patients may be as much as 50% higher than specimens from adults.
<b>Critical Values:</b>	N/A
<b>Limitations:</b>	Spinal fluid ACE activity to aid the diagnosis of neurosarcoidosis has been reported, however, there is insufficient evidence to support ACE being used for this purpose.  Serum ACE is significantly reduced in patients on ACE inhibitors (eg, Vasotec and captopril)  The reference interval for children and adolescents may be as much as 50% higher than specimens from adults.
<b>Methodology:</b>	Spectrophotometry (SP)
<b>References:</b>	<a href="#">Mayo Medical Laboratories Web Page</a> November 2017
<b>Updates:</b>	5/4/2009: Reference range revision at MML, previously reported as 7.0 - 46.0 U/L. 1/4/2012: Specimen shipping and storage changed from frozen to refrigerated. Volume requirements updated. 11/9/2017: Collection container update