

**Cerebral Cavernous Malformation1 (CCMI) KRITI Mutation Detection by Sequencing**

Cerebral cavernous malformations (CCM) are congenital vascular anomalies of the brain that can cause significant neurological disabilities, including intractable seizures and hemorrhagic stroke. One locus (of 3 identified so far) for autosomal dominant CCM (CCMI) maps to chromosome region 7q21-q22. Using a genomic sequence-based positional cloning strategy, *KRITI*, encoding a protein that interacts with the Krev-1/rap1a tumor suppressor, has been identified as the *CCMI* gene.

A single mutation is common to most Mexican-American families with CCM (+/-70%). This C1363T transition in exon 10 changes a *GLN* to a premature termination codon. Other Mexican-American and non-Hispanic Caucasian *CCMI* kindreds harbor other mutations in other exons of the *KRITI* gene. Identification of these other mutations has potential clinical significance for presymptomatic diagnosis of CCM in this population and their families. The identification of a *KRITI* mutation entails extraction of genomic DNA from blood, PCR amplification of 16 separate exons of the *KRITI* gene, sequencing and electrophoretic separation of product, and comparison of this patient specific sequence with "typical" sequence.

**Specimen Requirements**

- Collect 2-5 ml of whole blood in EDTA (purple top tube) or ACD (yellow top tube). 5 ml is the preferred volume.
- Only one blood tube is required for multiple tests.
- Ship whole blood specimens at room temperature.
- Do not freeze blood.
- During hot weather, include a frozen ice pack in the shipping container. Do not allow the ice pack to come in direct contact with the specimen tube.
- In cold weather, include an unfrozen ice pack to help moderate extremes in temperature. The DNA in whole blood is stable for at least 48 hours at 21°C, 5-7 days at 4°C.

**CPT Codes and Cost**

<i>CCMI</i> Mutation Test DNA Seq		<b>\$1,410.00</b>
Molec Diag, Ascertainment	83890	
Molec Diag, Isolation	83891	
Molecular Diag, Amplif x16	83898	
Mutat Id By Seq, Single Seg x16	83904	
Molecular Diag, Separation	83894	
Interpretation And Report	83912	

**Accreditation Info. CLIA ID #: 52D1027685** (expires 1/18/07) (CAP#: 7185561, AU ID: 1407125 expires 12/20/06)

**Ship to:**

Attn: Diagnostics Lab  
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