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| **Lab Dept:** | **Chemistry** |
| **Test Name:** | **CARBAMAZEPINE LEVEL** |

### *General Information*

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| **Lab Order Codes:** | CARB |
| **Synonyms:** | Tegretol®; Carbtrol®; CB2 |
| **CPT Codes:** | 80156–Carbamazepine; total |
| **Test Includes:** | Carbamazepine concentration (includes carbemazapine epoxide) reported in ug/mL. |

### *Logistics*

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| **Test Indications:** | Useful for therapeutic drug monitoring (TDM). Carbamazepine is used in the treatment of generalized tonic-clonic, partial-complex seizures. |
| **Lab Testing Sections:** | Chemistry |
| **Phone Numbers:** | MIN Lab: 612-813-6280<br>STP Lab: 651-220-6550 |
| **Test Availability:** | Daily, 24 hours |
| **Turnaround Time:** | 2 hours |
| **Special Instructions:** | N/A |

### *Specimen*

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| **Specimen Type:** | Blood |
| **Container:** | Green top (Li Heparin) tube **preferred**<br>Alternate tube: Red, marble or gold top tube |
| **Draw Volume:** | 0.6 mL blood |
| **Processed Volume:** | 0.2 mL serum/plasma |
| **Collection:** | Routine blood collection. Mix tubes containing anticoagulant by gentle inversion. |

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| **Special Processing:** | Lab Staff: Centrifuge specimen, remove serum/plasma aliquot into plastic sample cup. Analyze sample immediately or store at refrigerated temperatures. |
| **Patient Preparation:** | None |
| **Sample Rejection:** | Mislabeled or unlabeled specimen |

### *Interpretive*

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| **Reference Range:** | Therapeutic concentration: 4.0 – 8.0 ug/mL |
| **Critical Values:** | Toxic concentration: >20.0 ug/mL |
| **Limitations:** | N/A |
| **Methodology:** | Particle Enhance Turbidimetric Inhibition Immunoassay (PETINIA) |
| **References:** | Siemens Dimenstion Vista CRBM Flex™ reagent Instructions for Use, Siemens Healthcare Diagnostics 2012-10-29 Rev E PN 717087.001 |
| | Siemens Dimenstion Vista DRUG 2 CAL™ Instructions for Use, Siemens Healthcare Diagnostics, May 6, 2014 |
| | Siemens Dimenstion Vista CRBM Flex™ reagent cartridge Instructions for Use, Siemens Healthcare Diagnostics, Rev F PN 717087.001-US, 5/2/2009 |
| | Jacobs & DeMott Laboratory Test Handbook (2001) Lexi-Comp, Inc, Hudson, OH, 5th Edition |
| | Biorad Liquichek Unassayed Chemistry Control Product Insert, Bio-Rad Laboratories, Irvine, CA 92618 |
| **Updates:** | 5/1/2005: Critical range changed, previously reported as >15.0 ug/mL.<br>2/8/2016: Update alt tube types |