Twin Zygosity: DNA-Based Testing

Test Code: ZT  
Turnaround time: 2 weeks  
CPT Codes: 81265 x1

Condition Description

Indications

Twins can be either monozygotic (identical) or dizygotic (non-identical). Identifying zygosity of twins is essential in diagnosing and treatment of certain genetic conditions. Testing may be performed on prenatal and postnatal samples.

Samples from the twins, as well as both maternal and paternal blood, must be submitted. Amniocytes, chorionic vilus, or blood samples from the twins can be used for analysis.

Methodology

Comparative analysis of DNA samples has been conducted using PCR of polymorphic sites at the following fifteen markers: D8S1179, D21S11, D7S820, CSF1PO, D3S1358, TH01, D13S317, D16S539, D2S1338, D19S433, vWA, TPOX, D18S51, D5S818, FGA. Fragment analysis was performed using capillary electrophoresis.

Parental samples are used to determine likelihood of dizygotic twins having the same allelic pattern as monozygotic twins.

Detection

Over 99% of twin pairs tested will be determined to be monozygotic or dizygotic.

Reference Range

Qualitative assay.

Specimen Requirements

Type: Whole Blood

Specimen Requirements:

In EDTA (purple top) or ACD (yellow top) tube:
Infants (2 years): 3-5 ml  
Older Children & Adults: 5-10 ml

Specimen Collection and Shipping: Refrigerate until time of shipment. Ship sample within 5 days of collection at room temperature with overnight delivery.