MAYO CLINIC LABORATORIES

NEW TEST

Notification Date: October 1, 2024
Effective Date: November 4, 2024

T-Cell Receptor Gene Rearrangement, PCR, Tissue

Test ID: TCGET; performed at Mayo Clinic Laboratories Florida.

Useful for:
Determining whether a T-cell population is polyclonal or monoclonal using paraffin-embedded specimens

Methods:
Polymerase Chain Reaction (PCR)

Reference Values:
An interpretive report will be provided

Specimen Requirements:
Specimen Type: Paraffin-embedded bone marrow aspirate clot or paraffin-embedded tissue
Container/Tube: Paraffin block
Specimen Volume: Minimum of 4 slides; 10 um preferred

Specimen Stability Information:

Specimen Type	Temperature	Time
Tissue, Paraffin	Ambient (preferred)	
	Refrigerated	

Cautions:
To determine the significance of the result, it must always be interpreted in the context of other clinicopathologic information.

The interpretation of the presence or absence of a predominant T-cell receptor (TCR)-gene rearrangement profile is sometimes subjective.

The detection of a clonal TCR-gene rearrangement by this test is not necessarily synonymous with the presence of a T-cell neoplasm. False-positive results can occur because of the sensitivity of polymerase chain reaction (PCR) technique and the problem of nonuniform (skewed) amplification of target T-cell gene

rearrangements. The latter problem can occur when the total T-cell number in a sample is limited or due to physiologic skewing of the T-cell repertoire, as seen with aging, post transplantation, or T-cell reactions in autoimmune or (nonlymphoid) malignancies. False-negative results can occur for many reasons, including tissue sampling, poor amplification, or failure to detect a small minority of T-cell gene segment rearrangements with the use of consensus PCR primers. In some cases, an indeterminate or equivocal result will occur because the pattern of gene rearrangements is abnormal (compared to typical polyclonal T-cell processes), but not definitive, for a monoclonal T-cell population. In these situations, distinction of a small monoclonal subpopulation from an overrepresented, but reactive, population may not be possible.

CPT Code:
81340
81342
81479 (if appropriate)

Day(s) Performed: Monday through Friday **Report Available:** 1 to 8 days

Questions

Contact Bonnie Meyers, Laboratory Resource Coordinator at 800-533-1710.