

## **Laboratory Service Report**

## 1-800-533-1710

Patient Name SAMPLEREPORTS,TRECLOW	Patient ID SA00054654	<b>Age</b> 30	Gender F	Order # SA00054654
Ordering Phys CLIENT,CLIENT				<b>DOB</b> 03/08/1983
Client Order # SA00054654	Account Information			Report Notes
<b>Collected</b> 03/11/2013 13:02	C7028846-DLMP Roche 3050 Superior Drive	ester		
<b>Printed</b> 04/15/2013 13:04	Rochester, MN 55901			

Test	Flag	Results	Unit	Reference Value	Perform Site*
TREC, B			REPORTED 03/	11/2013 13:16	
CD3 T Cells	L	182	cells/mcL	550-2202	MCR
CD4 T Cells	L	73	cells/mcL	365-1437	MCR
CD8 T Cells	L	109	cells/mcL	171-846	MCR
TREC Copies			per 10(6) CD3		MCR
			Tcells	>770	

TREC copies are below the acceptable limit of detection (LOD) for this assay.

Interpretation

Interpretation: The assay is sensitive to detect reliably 5 or greater TREC-positive T cells in blood. Thymic output is undetectable for age. The TREC result correlates with the profound CD4 T cell lymphopenia. CD4 T cell homeostasis is maintained by a balance between thymic output and peripheral expansion of pre-existing T cells after puberty, while CD8 T cell homeostasis, in adults and older children, is maintained almost exclusively by peripheral expansion of pre-existing T cells.

Recommendations: For a comprehensive assessment of thymic output and corroboration of TREC results, recommend ordering the CD4 recent thymic emigrant (RTE) analysis (test number 89504). TRECs provide global and longitudinal assessment of thymic function for CD4 and CD8 T cells, but are affected by the longevity of naive T cells as well as cellular dilution due to T cell proliferation in the periphery. Quantitative RTE (CD4 T cells) analysis by flow cytometry provides an assessment of nascent thymic output (by identification of CD45RA+4+CD31+ T cells that have not undergone cell division and diluted their TREC).

Clinical Context: Unknown.

Sample Information: The sample provided is a baseline analysis of TREC copies relative to T cell counts. For research use only.

Reviewed by Jamie Bruflat

MCR

MCR

## \* Performing Site:

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MCR	Mayo Clinic Laboratories - Rochester Main Campus 200 First St SW Rochester, MN 55905	Lab Director: Franklin R. Cockerill, III, M.D.

Patient Name SAMPLEREPORTS,TRECLOW	Collection Date and Time 03/11/2013 13:02	Report Status Final
Page 1 of 1	** Reprinted **	** End of Report **

<sup>\*</sup> Report times for Mayo performed tests are CST/CDT