MAYO CLINIC
Mayo Medical Laboratories

TEST DEFINITION

3/14/2011

Code	Name
89318	T Cell Subsets, Regulatory (Tregs)

**** End of Name to order code Report ****

MML MML Test setup information

ORDER CODE	EFF DATE	TC	TITLE	Checking Normals	Print normals (# coded)	Perform Site *
89318	2/23/2011		T Cell Subsets, Regulatory (Tregs)			MCR

```
Transport temp : Refrig <72 hours\Ambient NO\Frozen NO
29143    % Activated CD4+ T cells (4+CD25+)
            Units: % CD4 T cells
               NO SEX
            No age        :                          ; #N29143
            1D to 2Y      :                          ; #N89318N
            3Y to 18Y     : 5.7-31.0                 ; 5.7-31.0
            19Y to 84Y    : 2.4-35.0                 ; 2.4-35.0
            85Y to 150Y   :                          ; #N89318N85
               MALE
            No age        :                          ; #N29143
            1D to 2Y      :                          ; #N89318N
            3Y to 18Y     : 5.7-31.0                 ; 5.7-31.0
            19Y to 84Y    : 2.4-35.0                 ; 2.4-35.0
            85Y to 150Y   :                          ; #N89318N85
               FEMALE
            No age        :                          ; #N29143
            1D to 2Y      :                          ; #N89318N
            3Y to 18Y     : 5.7-31.0                 ; 5.7-31.0
            19Y to 84Y    : 2.4-35.0                 ; 2.4-35.0
            85Y to 150Y   :                          ; #N89318N85
         -  -  -  -  -
29144    % Natural Tregs
            Units: % CD4 T cells
               NO SEX
            No age        :                          ; #N29144
```

(continued next page)

```
  ORDER      EFF                                                                    Perform
  CODE       DATE   TC     TITLE          Checking Normals              Print normals (# coded)  Site *
 ------      ----   ----   ----------     ----------------              -----------------------  -------
89318  (continued)
                    29144    % Natural Tregs  (continued)
                                1D to 2Y      :                          ; #N89318N
                                3Y to 18Y     : 0.7-4.0                  ; 0.7-4.0
                                19Y to 84Y    : 0.6-4.3                  ; 0.6-4.3
                                85Y to 150Y   :                          ; #N89318N85
                                   MALE
                                No age        :                          ; #N29144
                                1D to 2Y      :                          ; #N89318N
                                3Y to 18Y     : 0.7-4.0                  ; 0.7-4.0
                                19Y to 84Y    : 0.6-4.3                  ; 0.6-4.3
                                85Y to 150Y   :                          ; #N89318N85
                                   FEMALE
                                No age        :                          ; #N29144
                                1D to 2Y      :                          ; #N89318N
                                3Y to 18Y     : 0.7-4.0                  ; 0.7-4.0
                                19Y to 84Y    : 0.6-4.3                  ; 0.6-4.3
                                85Y to 150Y   :                          ; #N89318N85
                         -  -  -  -  -
                    29145    % N. Naive Tregs
                                Units: % CD4 T cells
                                   NO SEX
                                No age        :                          ; #N29145
                                1D to 2Y      :                          ; #N89318N
                                3Y to 18Y     : 0.6-9.0                  ; 0.6-9.0
                                19Y to 84Y    : 0.1-2.3                  ; 0.1-2.3
                                85Y to 150Y   :                          ; #N89318N85
                                   MALE
                                No age        :                          ; #N29145
                                1D to 2Y      :                          ; #N89318N
                                3Y to 18Y     : 0.6-9.0                  ; 0.6-9.0
                                19Y to 84Y    : 0.1-2.3                  ; 0.1-2.3
                                85Y to 150Y   :                          ; #N89318N85
                                   FEMALE
                                No age        :                          ; #N29145
                                1D to 2Y      :                          ; #N89318N
                                3Y to 18Y     : 0.6-9.0                  ; 0.6-9.0
                                19Y to 84Y    : 0.1-2.3                  ; 0.1-2.3
                                85Y to 150Y   :                          ; #N89318N85
                         -  -  -  -  -
                    29146    % CD4+CD25-CD127+ (Tr1/Th3)
                                Units: % CD4 T cells
                                   NO SEX
                                No age        :                          ; #N29146
                                1D to 2Y      :                          ; #N89318N
                                3Y to 8Y      : 51-78                    ; 51-78
```

```
                              9Y to 18Y     : 51-84                    ; 51-84
                              19Y to 84Y    : 24-88                    ; 24-88
                              85Y to 150Y   :                          ; #N89318N85
                                 MALE
                              No age        :                          ; #N29146
                     (continued next page)

MML                                MML Test setup information

  ORDER      EFF                                                                          Perform
  CODE       DATE   TC     TITLE          Checking Normals              Print normals (# coded)  Site *
 ------      ----   ----   ----------     ----------------              -----------------------  -------
89318  (continued)
                     29146    % CD4+CD25-CD127+ (Tr1/Th3)  (continued)
                              1D to 2Y      :                          ; #N89318N
                              3Y to 8Y      : 51-78                    ; 51-78
                              9Y to 18Y     : 51-84                    ; 51-84
                              19Y to 84Y    : 24-88                    ; 24-88
                              85Y to 150Y   :                          ; #N89318N85
                                 FEMALE
                              No age        :                          ; #N29146
                              1D to 2Y      :                          ; #N89318N
                              3Y to 8Y      : 51-78                    ; 51-78
                              9Y to 18Y     : 51-84                    ; 51-84
                              19Y to 84Y    : 24-88                    ; 24-88
                              85Y to 150Y   :                          ; #N89318N85
                           -  -  -  -  -
                     29147    Activated CD4+ T cells (4+CD25+)
                              Units: cells/mcL
                                 NO SEX
                              No age        :                          ; #N29147
                              1D to 2Y      :                          ; #N89318N
                              3Y to 18Y     : 36-248                   ; 36-248
                              19Y to 84Y    : 16-323                   ; 16-323
                              85Y to 150Y   :                          ; #N89318N85
                                 MALE
                              No age        :                          ; #N29147
                              1D to 2Y      :                          ; #N89318N
                              3Y to 18Y     : 36-248                   ; 36-248
                              19Y to 84Y    : 16-323                   ; 16-323
                              85Y to 150Y   :                          ; #N89318N85
                                 FEMALE
                              No age        :                          ; #N29147
                              1D to 2Y      :                          ; #N89318N
                              3Y to 18Y     : 36-248                   ; 36-248
                              19Y to 84Y    : 16-323                   ; 16-323
                              85Y to 150Y   :                          ; #N89318N85
                           -  -  -  -  -
                     29148    CD4+CD25+CD127loCD45RO+ (Nat Tregs)
                              Units: cells/mcL
                                 NO SEX
```

```
                    No age        :                          ; #N29148
                    1D to 2Y      :                          ; #N89318N
                    3Y to 18Y     : 4-25                     ; 4-25
                    19Y to 84Y    : 5-43                     ; 5-43
                    85Y to 150Y   :                          ; #N89318N85
                       MALE
                    No age        :                          ; #N29148
                    1D to 2Y      :                          ; #N89318N
                    3Y to 18Y     : 4-25                     ; 4-25
                    19Y to 84Y    : 5-43                     ; 5-43
                    85Y to 150Y   :                          ; #N89318N85
                       FEMALE
```
(continued next page)


```
  ORDER      EFF                                                                    Perform
  CODE       DATE   TC     TITLE          Checking Normals              Print normals (# coded)  Site *
 ------      ----   ----   ----------     ----------------              -----------------------  -------
89318  (continued)
                    29148    CD4+CD25+CD127loCD45RO+ (Nat Tregs)  (continued)
                       No age        :                          ; #N29148
                       1D to 2Y      :                          ; #N89318N
                       3Y to 18Y     : 4-25                     ; 4-25
                       19Y to 84Y    : 5-43                     ; 5-43
                       85Y to 150Y   :                          ; #N89318N85
                    -  -  -  -  -
                    29149    CD4+CD25+CD127loCD45RA+ Naive Tregs
                       Units: cells/mcL
                          NO SEX
                       No age        :                          ; #N29149
                       1D to 2Y      :                          ; #N89318N
                       3Y to 18Y     : 4.0-67.0                 ; 4.0-67.0
                       19Y to 84Y    : 0.4-22.0                 ; 0.4-22.0
                       85Y to 150Y   :                          ; #N89318N85
                          MALE
                       No age        :                          ; #N29149
                       1D to 2Y      :                          ; #N89318N
                       3Y to 18Y     : 4.0-67.0                 ; 4.0-67.0
                       19Y to 84Y    : 0.4-22.0                 ; 0.4-22.0
                       85Y to 150Y   :                          ; #N89318N85
                          FEMALE
                       No age        :                          ; #N29149
                       1D to 2Y      :                          ; #N89318N
                       3Y to 18Y     : 4.0-67.0                 ; 4.0-67.0
                       19Y to 84Y    : 0.4-22.0                 ; 0.4-22.0
                       85Y to 150Y   :                          ; #N89318N85
                    -  -  -  -  -
                    29150    CD4+CD25-CD127+ (Tr1/Th3)
                       Units: cells/mcL
                          NO SEX
```

```
                    No age        :                          ; #N29150
                    1D to 2Y      :                          ; #N89318N
                    3Y to 18Y     : 236-1058                 ; 236-1058
                    19Y to 84Y    : 133-1304                 ; 133-1304
                    85Y to 150Y   :                          ; #N89318N85
                       MALE
                    No age        :                          ; #N29150
                    1D to 2Y      :                          ; #N89318N
                    3Y to 18Y     : 236-1058                 ; 236-1058
                    19Y to 84Y    : 133-1304                 ; 133-1304
                    85Y to 150Y   :                          ; #N89318N85
                       FEMALE
                    No age        :                          ; #N29150
                    1D to 2Y      :                          ; #N89318N
                    3Y to 18Y     : 236-1058                 ; 236-1058
                    19Y to 84Y    : 133-1304                 ; 133-1304
                    85Y to 150Y   :                          ; #N89318N85
                 -  -  -  -  -
          29177    Interpretation
                   TEST CODE ALWAYS MESSAGE - [Z29177]
                   Z29177   CD4+CD25+CD127- T-cells are FOXP3-expressing regulatory
                            T-cells. Seddiki N et al, J. Exp Med. 2006, 203(7):
                            1693-1700 and Liu W et al, J Exp Med, 2006, 203(7):
                            1701-1711.
                            Analyte Specific Reagent
                            This test was developed and its performance characteristics
                            determined by Laboratory Medicine and Pathology, Mayo
                            Clinic. This test has not been cleared or
                            approved by the U.S. Food and Drug Administration.
                 -  -  -  -  -
- - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

MML MML Test setup information

*Performing Site Legend

```
==========================================================================================================
==
MCR     Mayo Clinic Dpt of Lab Med & Pathology              LAB DIRECTOR:   Franklin R. Cockerill, III, M.D.
        200 First Street SW
        Rochester, MN  55905
==========================================================================================================
==
```

*** End of Report ***

MML Messages used as normals

CODE	TEXT
N29143	Not established (0-2 y) 5.7-31.0 (3-18 y) 2.4-35.0 (19-84 y) Not established (>= 85y)
N29144	Not established (0-2 y) 0.7-4.0 (3-18 y) 0.6-4.3 (19-84 y) Not established (>=85 y)
N29145	Not established (0-2 y) 0.6-9.0 (3-18 y) 0.1-2.3 (19-84 y) Not established (>= 85 y)
N29146	Not established (0-2 y) 51-78 (3-8 y) 51-84 (9-18 y) 24-88 (19-84 y) Not estabished (>=85 y)
N29147	Not established (0-2 y) 36-248 (3-18 y) 16-323 (19-84 y) Not established (>= 85 y)
N29148	Not established (0-2 y) 4-25 (3-18 y) 5-43 (19-84 y) Not established (>= 85 y)
N29149	Not established (0-2 y) 4-67 (3-18 y) 0.4-22.0 (19-84 y) Not established (>= 85 y)

MML Messages used as normals

CODE	TEXT
N29150	Not established (0-2 y) 236-1058 (3-18 y) 133-1304 (19-84 y) Not established (>=85 y)
N89318N	Reference values have not been

```
             established for patients that are
             <3 years.
--------
N89318N85    Reference values have not been
             established for patients that are
             >=85 years.
--------


Total of 10 normals codes

    *** End of Report ***
```