

TEST DEFINITION

10/15/2010

Code Name

89220 Hyper IgM Panel, B

**** 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 *
89220(profile)			Hyper IgM Panel, B			
9336	9/30/2010		T- and B-Cell QN by Flow Cytometry			MCR
			Transport temp : Ambient <72 hours\Refrig <72 hours OK\Frozen NO			
9336			T- & B-Cell QN by Flow Cytometry			
			- - - - -			
		3321	CD45 Lymph Count, Flow			
			Units: thou/mcL			
			NO SEX			
			No age	:	#NN3321	
			1D to 17Y	:	0.66-4.60	
			18Y to 55Y	:	0.99-3.15	
			56Y to 150Y	:	1.00-3.33	
			MALE			
			No age	:	#NN3321	
			1D to 17Y	:	0.66-4.60	
			18Y to 55Y	:	0.99-3.15	
			56Y to 150Y	:	1.00-3.33	
			FEMALE			
			No age	:	#NN3321	
			1D to 17Y	:	0.66-4.60	
			18Y to 55Y	:	0.99-3.15	
			56Y to 150Y	:	1.00-3.33	
			- - - - -			
		3316	% CD3 (T Cells)			
			Units: %			
			NO SEX			
			No age	:	#N3316	

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ORDER CODE -----	EFF DATE ----	TC ----	TITLE -----	Checking Normals -----	Print normals (# coded) -----	Perform Site * -----
89220	(continued)					
		3316	% CD3 (T Cells)	(continued)		
			1D to 2M	: 53-84	; 53-84	
			3M to 5M	: 51-77	; 51-77	
			6M to 11M	: 49-76	; 49-76	
			12M to 23M	: 53-75	; 53-75	
			24M to 5Y	: 56-75	; 56-75	
			6Y to 11Y	: 60-76	; 60-76	
			12Y to 17Y	: 56-84	; 56-84	
			18Y to 55Y	: 59-83	; 59-83	
			56Y to 150Y	: 49-87	; 49-87	
			MALE			
			No age	:	; #N3316	
			1D to 2M	: 53-84	; 53-84	
			3M to 5M	: 51-77	; 51-77	
			6M to 11M	: 49-76	; 49-76	
			12M to 23M	: 53-75	; 53-75	
			24M to 5Y	: 56-75	; 56-75	
			6Y to 11Y	: 60-76	; 60-76	
			12Y to 17Y	: 56-84	; 56-84	
			18Y to 55Y	: 59-83	; 59-83	
			56Y to 150Y	: 49-87	; 49-87	
			FEMALE			
			No age	:	; #N3316	
			1D to 2M	: 53-84	; 53-84	
			3M to 5M	: 51-77	; 51-77	
			6M to 11M	: 49-76	; 49-76	
			12M to 23M	: 53-75	; 53-75	
			24M to 5Y	: 56-75	; 56-75	
			6Y to 11Y	: 60-76	; 60-76	
			12Y to 17Y	: 56-84	; 56-84	
			18Y to 55Y	: 59-83	; 59-83	
			56Y to 150Y	: 49-87	; 49-87	
		3318	% CD19 (B Cells)			
			Units: %			
			NO SEX			
			No age	:	; #N3318	
			1D to 2M	: 6-32	; 6-32	
			3M to 5M	: 11-41	; 11-41	
			6M to 11M	: 14-37	; 14-37	
			12M to 23M	: 16-35	; 16-35	
			24M to 5Y	: 14-33	; 14-33	
			6Y to 11Y	: 13-27	; 13-27	
			12Y to 17Y	: 6-23	; 6-23	

18Y to 55Y	:	6-22	:	6-22
56Y to 150Y	:	3-20	:	3-20
MALE				
No age	:		:	#N3318
1D to 2M	:	6-32	:	6-32
3M to 5M	:	11-41	:	11-41

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MML MML Test setup information

ORDER CODE	EFF DATE	TC	TITLE	Checking Normals	Print normals (# coded)	Perform Site *
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89220	(continued)	3318	% CD19 (B Cells)	(continued)		
			6M to 11M	: 14-37	: 14-37	
			12M to 23M	: 16-35	: 16-35	
			24M to 5Y	: 14-33	: 14-33	
			6Y to 11Y	: 13-27	: 13-27	
			12Y to 17Y	: 6-23	: 6-23	
			18Y to 55Y	: 6-22	: 6-22	
			56Y to 150Y	: 3-20	: 3-20	
			FEMALE			
			No age	:	: #N3318	
			1D to 2M	: 6-32	: 6-32	
			3M to 5M	: 11-41	: 11-41	
			6M to 11M	: 14-37	: 14-37	
			12M to 23M	: 16-35	: 16-35	
			24M to 5Y	: 14-33	: 14-33	
			6Y to 11Y	: 13-27	: 13-27	
			12Y to 17Y	: 6-23	: 6-23	
			18Y to 55Y	: 6-22	: 6-22	
			56Y to 150Y	: 3-20	: 3-20	
		4054	% CD16+CD56 (NK cells)			
			Units: %			
			NO SEX			
			No age	:	: #N4054	
			1D to 2M	: 4-18	: 4-18	
			3M to 5M	: 3-14	: 3-14	
			6M to 23M	: 3-15	: 3-15	
			24M to 11Y	: 4-17	: 4-17	
			12Y to 17Y	: 3-22	: 3-22	
			18Y to 55Y	: 6-27	: 6-27	
			56Y to 150Y	: 6-35	: 6-35	
			MALE			
			No age	:	: #N4054	
			1D to 2M	: 4-18	: 4-18	
			3M to 5M	: 3-14	: 3-14	
			6M to 23M	: 3-15	: 3-15	
			24M to 11Y	: 4-17	: 4-17	

12Y to 17Y	:	3-22	;	3-22
18Y to 55Y	:	6-27	;	6-27
56Y to 150Y	:	6-35	;	6-35
FEMALE				
No age	:		;	#N4054
1D to 2M	:	4-18	;	4-18
3M to 5M	:	3-14	;	3-14
6M to 23M	:	3-15	;	3-15
24M to 11Y	:	4-17	;	4-17
12Y to 17Y	:	3-22	;	3-22
18Y to 55Y	:	6-27	;	6-27
56Y to 150Y	:	6-35	;	6-35

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MML MML Test setup information

ORDER CODE	EFF DATE	TC	TITLE	Checking Normals	Print normals (# coded)	Perform Site *
89220	(continued)	3319	% CD4 (Helper Cells)			
			Units: %			
			NO SEX			
			No age	:	;	#N3319
			1D to 2M	:	;	35-64
			3M to 5M	:	;	35-56
			6M to 11M	:	;	31-56
			12M to 23M	:	;	32-51
			24M to 5Y	:	;	28-47
			6Y to 11Y	:	;	31-47
			12Y to 17Y	:	;	31-52
			18Y to 55Y	:	;	31-59
			56Y to 150Y	:	;	32-67
			MALE			
			No age	:	;	#N3319
			1D to 2M	:	;	35-64
			3M to 5M	:	;	35-56
			6M to 11M	:	;	31-56
			12M to 23M	:	;	32-51
			24M to 5Y	:	;	28-47
			6Y to 11Y	:	;	31-47
			12Y to 17Y	:	;	31-52
			18Y to 55Y	:	;	31-59
			56Y to 150Y	:	;	32-67
			FEMALE			
			No age	:	;	#N3319
			1D to 2M	:	;	35-64
			3M to 5M	:	;	35-56
			6M to 11M	:	;	31-56
			12M to 23M	:	;	32-51

24M to 5Y : 28-47 ; 28-47
 6Y to 11Y : 31-47 ; 31-47
 12Y to 17Y : 31-52 ; 31-52
 18Y to 55Y : 31-59 ; 31-59
 56Y to 150Y : 32-67 ; 32-67

3320 % CD8 (Supp'r Cells)
 Units: %
 NO SEX
 No age : ; #N3320
 1D to 2M : 12-28 ; 12-28
 3M to 5M : 12-23 ; 12-23
 6M to 11M : 12-24 ; 12-24
 12M to 23M : 14-30 ; 14-30
 24M to 5Y : 16-30 ; 16-30
 6Y to 17Y : 18-35 ; 18-35
 18Y to 55Y : 12-38 ; 12-38
 56Y to 150Y : 8-40 ; 8-40
 MALE
 No age : ; #N3320
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MML MML Test setup information

ORDER CODE	EFF DATE	TC	TITLE	Checking Normals	Print normals (# coded)	Perform Site *
89220	(continued)	3320	% CD8 (Supp'r Cells)	(continued)		
			1D to 2M	: 12-28	; 12-28	
			3M to 5M	: 12-23	; 12-23	
			6M to 11M	: 12-24	; 12-24	
			12M to 23M	: 14-30	; 14-30	
			24M to 5Y	: 16-30	; 16-30	
			6Y to 17Y	: 18-35	; 18-35	
			18Y to 55Y	: 12-38	; 12-38	
			56Y to 150Y	: 8-40	; 8-40	
			FEMALE			
			No age	: ;	#N3320	
			1D to 2M	: 12-28	; 12-28	
			3M to 5M	: 12-23	; 12-23	
			6M to 11M	: 12-24	; 12-24	
			12M to 23M	: 14-30	; 14-30	
			24M to 5Y	: 16-30	; 16-30	
			6Y to 17Y	: 18-35	; 18-35	
			18Y to 55Y	: 12-38	; 12-38	
			56Y to 150Y	: 8-40	; 8-40	
3322			CD3 (T Cells)			
			Units: cells/mcL			
			NO SEX			

No age : ; #N3322
 1D to 2M : 2500-5500 ; 2500-5500
 3M to 5M : 2500-5600 ; 2500-5600
 6M to 11M : 1900-5900 ; 1900-5900
 12M to 23M : 2100-6200 ; 2100-6200
 24M to 5Y : 1400-3700 ; 1400-3700
 6Y to 11Y : 1200-2600 ; 1200-2600
 12Y to 17Y : 1000-2200 ; 1000-2200
 18Y to 55Y : 677-2383 ; 677-2383
 56Y to 150Y : 617-2254 ; 617-2254

MALE

No age : ; #N3322
 1D to 2M : 2500-5500 ; 2500-5500
 3M to 5M : 2500-5600 ; 2500-5600
 6M to 11M : 1900-5900 ; 1900-5900
 12M to 23M : 2100-6200 ; 2100-6200
 24M to 5Y : 1400-3700 ; 1400-3700
 6Y to 11Y : 1200-2600 ; 1200-2600
 12Y to 17Y : 1000-2200 ; 1000-2200
 18Y to 55Y : 677-2383 ; 677-2383
 56Y to 150Y : 617-2254 ; 617-2254

FEMALE

No age : ; #N3322
 1D to 2M : 2500-5500 ; 2500-5500
 3M to 5M : 2500-5600 ; 2500-5600
 6M to 11M : 1900-5900 ; 1900-5900
 12M to 23M : 2100-6200 ; 2100-6200

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MML MML Test setup information

ORDER CODE	EFF DATE	TC	TITLE	Checking Normals	Print normals (# coded)	Perform Site *
89220	(continued)	3322	CD3 (T Cells)	(continued)		
			24M to 5Y	: 1400-3700	; 1400-3700	
			6Y to 11Y	: 1200-2600	; 1200-2600	
			12Y to 17Y	: 1000-2200	; 1000-2200	
			18Y to 55Y	: 677-2383	; 677-2383	
			56Y to 150Y	: 617-2254	; 617-2254	
		3324	CD19 (B Cells)			
			Units: cells/mcL			
			NO SEX			
			No age	: ; #N3324		
			1D to 2M	: 300-2000	; 300-2000	
			3M to 5M	: 430-3000	; 430-3000	
			6M to 11M	: 610-2600	; 610-2600	
			12M to 23M	: 720-2600	; 720-2600	
			24M to 5Y	: 390-1400	; 390-1400	

6Y to 11Y	:	270-860	;	270-860
12Y to 17Y	:	110-570	;	110-570
18Y to 55Y	:	99-527	;	99-527
56Y to 150Y	:	31-409	;	31-409
MALE				
No age	:		;	#N3324
1D to 2M	:	300-2000	;	300-2000
3M to 5M	:	430-3000	;	430-3000
6M to 11M	:	610-2600	;	610-2600
12M to 23M	:	720-2600	;	720-2600
24M to 5Y	:	390-1400	;	390-1400
6Y to 11Y	:	270-860	;	270-860
12Y to 17Y	:	110-570	;	110-570
18Y to 55Y	:	99-527	;	99-527
56Y to 150Y	:	31-409	;	31-409
FEMALE				
No age	:		;	#N3324
1D to 2M	:	300-2000	;	300-2000
3M to 5M	:	430-3000	;	430-3000
6M to 11M	:	610-2600	;	610-2600
12M to 23M	:	720-2600	;	720-2600
24M to 5Y	:	390-1400	;	390-1400
6Y to 11Y	:	270-860	;	270-860
12Y to 17Y	:	110-570	;	110-570
18Y to 55Y	:	99-527	;	99-527
56Y to 150Y	:	31-409	;	31-409

4055 CD16+CD56 (NK cells)

Units: cells/mcL

NO SEX

No age	:		;	#N4055
1D to 2M	:	170-1100	;	170-1100
3M to 5M	:	170-830	;	170-830
6M to 11M	:	160-950	;	160-950

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MML MML Test setup information

ORDER CODE	EFF DATE	TC	TITLE	Checking Normals	Print normals (# coded)	Perform Site *
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89220	(continued)					
		4055	CD16+CD56 (NK cells)	(continued)		
			12M to 23M	: 180-920	;	180-920
			24M to 5Y	: 130-720	;	130-720
			6Y to 11Y	: 100-480	;	100-480
			12Y to 17Y	: 70-480	;	70-480
			18Y to 55Y	: 101-678	;	101-678
			56Y to 150Y	: 110-657	;	110-657
			MALE			
			No age	:	;	#N4055

1D to 2M : 170-1100 ; 170-1100
 3M to 5M : 170-830 ; 170-830
 6M to 11M : 160-950 ; 160-950
 12M to 23M : 180-920 ; 180-920
 24M to 5Y : 130-720 ; 130-720
 6Y to 11Y : 100-480 ; 100-480
 12Y to 17Y : 70-480 ; 70-480
 18Y to 55Y : 101-678 ; 101-678
 56Y to 150Y : 110-657 ; 110-657

FEMALE

No age : ; #N4055
 1D to 2M : 170-1100 ; 170-1100
 3M to 5M : 170-830 ; 170-830
 6M to 11M : 160-950 ; 160-950
 12M to 23M : 180-920 ; 180-920
 24M to 5Y : 130-720 ; 130-720
 6Y to 11Y : 100-480 ; 100-480
 12Y to 17Y : 70-480 ; 70-480
 18Y to 55Y : 101-678 ; 101-678
 56Y to 150Y : 110-657 ; 110-657

3325 CD4 (Helper Cells)
 Units: cells/mcL

NO SEX

No age : ; #N3325
 1D to 2M : 1600-4000 ; 1600-4000
 3M to 5M : 1800-4000 ; 1800-4000
 6M to 11M : 1400-4300 ; 1400-4300
 12M to 23M : 1300-3400 ; 1300-3400
 24M to 5Y : 700-2200 ; 700-2200
 6Y to 11Y : 650-1500 ; 650-1500
 12Y to 17Y : 530-1300 ; 530-1300
 18Y to 55Y : 424-1509 ; 424-1509
 56Y to 150Y : 430-1513 ; 430-1513

MALE

No age : ; #N3325
 1D to 2M : 1600-4000 ; 1600-4000
 3M to 5M : 1800-4000 ; 1800-4000
 6M to 11M : 1400-4300 ; 1400-4300
 12M to 23M : 1300-3400 ; 1300-3400
 24M to 5Y : 700-2200 ; 700-2200

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MML MML Test setup information

ORDER CODE	EFF DATE	TC	TITLE	Checking Normals	Print normals (# coded)	Perform Site *
89220	(continued)	3325	CD4 (Helper Cells)	(continued)		
			6Y to 11Y	: 650-1500	; 650-1500	

12Y to 17Y	:	530-1300	;	530-1300
18Y to 55Y	:	424-1509	;	424-1509
56Y to 150Y	:	430-1513	;	430-1513
FEMALE				
No age	:		;	#N3325
1D to 2M	:	1600-4000	;	1600-4000
3M to 5M	:	1800-4000	;	1800-4000
6M to 11M	:	1400-4300	;	1400-4300
12M to 23M	:	1300-3400	;	1300-3400
24M to 5Y	:	700-2200	;	700-2200
6Y to 11Y	:	650-1500	;	650-1500
12Y to 17Y	:	530-1300	;	530-1300
18Y to 55Y	:	424-1509	;	424-1509
56Y to 150Y	:	430-1513	;	430-1513

3326 CD8 (Supp'r Cells)
Units: cells/mcL

NO SEX				
No age	:		;	#N3326
1D to 2M	:	560-1700	;	560-1700
3M to 5M	:	590-1600	;	590-1600
6M to 11M	:	500-1700	;	500-1700
12M to 23M	:	620-2000	;	620-2000
24M to 5Y	:	490-1300	;	490-1300
6Y to 11Y	:	370-1100	;	370-1100
12Y to 17Y	:	330-920	;	330-920
18Y to 55Y	:	169-955	;	169-955
56Y to 150Y	:	101-839	;	101-839
MALE				
No age	:		;	#N3326
1D to 2M	:	560-1700	;	560-1700
3M to 5M	:	590-1600	;	590-1600
6M to 11M	:	500-1700	;	500-1700
12M to 23M	:	620-2000	;	620-2000
24M to 5Y	:	490-1300	;	490-1300
6Y to 11Y	:	370-1100	;	370-1100
12Y to 17Y	:	330-920	;	330-920
18Y to 55Y	:	169-955	;	169-955
56Y to 150Y	:	101-839	;	101-839
FEMALE				
No age	:		;	#N3326
1D to 2M	:	560-1700	;	560-1700
3M to 5M	:	590-1600	;	590-1600
6M to 11M	:	500-1700	;	500-1700
12M to 23M	:	620-2000	;	620-2000
24M to 5Y	:	490-1300	;	490-1300
6Y to 11Y	:	370-1100	;	370-1100
12Y to 17Y	:	330-920	;	330-920

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ORDER CODE -----	EFF DATE -----	TC -----	TITLE -----	Checking Normals -----	Print normals (# coded) -----	Perform Site * -----
89220	(continued)					
		3326	CD8 (Supp'r Cells) (continued)	18Y to 55Y : 169-955 56Y to 150Y : 101-839	; 169-955 ; 101-839	
		3327	H/S Ratio	NO SEX All Ages : 1.0- MALE All Ages : 1.0- FEMALE All Ages : 1.0-	; >=1.0 ; >=1.0 ; >=1.0	
		6657	Comment			
87994	10/1/2010		Immune Assessment B Cell Subsets, B			MCR
			Transport temp : Refrig <48 hours\Ambient <48 hours OK\Frozen NO			
		30296	CD19+ % of total Lymphocytes	Units: % NO SEX No age : 1D to 18Y : 4.3-23.2 19Y to 150Y : 2.8-17.4 MALE No age : 1D to 18Y : 4.3-23.2 19Y to 150Y : 2.8-17.4 FEMALE No age : 1D to 18Y : 4.3-23.2 19Y to 150Y : 2.8-17.4	; #N30296NA ; 4.3-23.2 ; 2.8-17.4 ; #N30296NA ; 4.3-23.2 ; 2.8-17.4 ; #N30296NA ; 4.3-23.2 ; 2.8-17.4	
			TEST CODE ALWAYS MESSAGE - [30296U]			
			30296U This assay is performed using peripheral blood mononuclear cells (PBMC) isolated from whole blood. CD19 percentage and absolute results should not be directly compared to the CD19 results from the T & B cell Surface Markers AG assay using whole blood, because cells are lost during the PBMC isolation process.			
		29094	CD20+ % of total Lymphocytes	Units: % NO SEX No age : 1D to 18Y : 4.2-24.1 19Y to 150Y : 3.2-16.8 MALE No age : 1D to 18Y : 4.2-24.1	; #N29094 ; 4.2-24.1 ; 3.2-16.8 ; #N29094 ; 4.2-24.1	

19Y to 150Y : 3.2-16.8 ; 3.2-16.8
 FEMALE
 No age : ; #N29094
 1D to 18Y : 4.2-24.1 ; 4.2-24.1

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MML MML Test setup information

ORDER CODE	EFF DATE	TC	TITLE	Checking Normals	Print normals (# coded)	Perform Site *
89220	(continued)					
		29094	CD20+ % of total Lymphocytes	(continued)		
			19Y to 150Y	: 3.2-16.8	; 3.2-16.8	
		30298	CD27+ % of CD19+ B cells			
			Units: %			
			NO SEX			
			No age	:	; #N30298NA	
			1D to 18Y	: 4.6-49.1	; 4.6-49.1	
			19Y to 150Y	: 6.3-52.8	; 6.3-52.8	
			MALE			
			No age	:	; #N30298NA	
			1D to 18Y	: 4.6-49.1	; 4.6-49.1	
			19Y to 150Y	: 6.3-52.8	; 6.3-52.8	
			FEMALE			
			No age	:	; #N30298NA	
			1D to 18Y	: 4.6-49.1	; 4.6-49.1	
			19Y to 150Y	: 6.3-52.8	; 6.3-52.8	
		30300	CD27+ IgM+ IgD+ % of CD19+ B cells			
			Units: %			
			NO SEX			
			No age	:	; #N30300NA	
			1D to 18Y	: 0.2-12.0	; 0.2-12.0	
			19Y to 150Y	: 1.7-29.3	; 1.7-29.3	
			MALE			
			No age	:	; #N30300NA	
			1D to 18Y	: 0.2-12.0	; 0.2-12.0	
			19Y to 150Y	: 1.7-29.3	; 1.7-29.3	
			FEMALE			
			No age	:	; #N30300NA	
			1D to 18Y	: 0.2-12.0	; 0.2-12.0	
			19Y to 150Y	: 1.7-29.3	; 1.7-29.3	
		30302	CD27+ IgM- IgD- % of CD19+ B cells			
			Units: %			
			NO SEX			
			No age	:	; #N30302NA	
			1D to 18Y	: 1.9-30.4	; 1.9-30.4	
			19Y to 150Y	: 2.3-26.5	; 2.3-26.5	

MALE
 No age : ; #N30302NA
 1D to 18Y : 1.9-30.4 ; 1.9-30.4
 19Y to 150Y : 2.3-26.5 ; 2.3-26.5
 FEMALE
 No age : ; #N30302NA
 1D to 18Y : 1.9-30.4 ; 1.9-30.4
 19Y to 150Y : 2.3-26.5 ; 2.3-26.5

- - - - -
 30304 CD27+ IgM+ IgD- % of CD19+ B cells
 Units: %
 (continued next page)

MML MML Test setup information

ORDER CODE	EFF DATE	TC	TITLE	Checking Normals	Print normals (# coded)	Perform Site *
-----	-----	----	-----	-----	-----	-----
89220	(continued)					
		30304	CD27+ IgM+ IgD- % of CD19+ B cells	(continued)		
			NO SEX			
			No age	:		#N30304NA
			1D to 18Y	:	0.3-13.1	0.3-13.1
			19Y to 150Y	:	0.0-5.3	0.0-5.3
			MALE			
			No age	:		#N30304NA
			1D to 18Y	:	0.3-13.1	0.3-13.1
			19Y to 150Y	:	0.0-5.3	0.0-5.3
			FEMALE			
			No age	:		#N30304NA
			1D to 18Y	:	0.3-13.1	0.3-13.1
			19Y to 150Y	:	0.0-5.3	0.0-5.3
		30306	IgM+ % of CD19+ B cells			
			Units: %			
			NO SEX			
			No age	:		#N30306NA
			1D to 18Y	:	32.8-82.6	32.8-82.6
			19Y to 150Y	:	26.0-78.0	26.0-78.0
			MALE			
			No age	:		#N30306NA
			1D to 18Y	:	32.8-82.6	32.8-82.6
			19Y to 150Y	:	26.0-78.0	26.0-78.0
			FEMALE			
			No age	:		#N30306NA
			1D to 18Y	:	32.8-82.6	32.8-82.6
			19Y to 150Y	:	26.0-78.0	26.0-78.0
		30308	CD38+ IgM- % of CD19+ B cells			
			Units: %			
			NO SEX			

No age : ; #N30308NA
 1D to 18Y : 2.9-51.8 ; 2.9-51.8
 19Y to 150Y : 4.1-42.2 ; 4.1-42.2
 MALE
 No age : ; #N30308NA
 1D to 18Y : 2.9-51.8 ; 2.9-51.8
 19Y to 150Y : 4.1-42.2 ; 4.1-42.2
 FEMALE
 No age : ; #N30308NA
 1D to 18Y : 2.9-51.8 ; 2.9-51.8
 19Y to 150Y : 4.1-42.2 ; 4.1-42.2

30310 CD38+ IgM+ % of CD19+ B cells
 Units: %
 NO SEX
 No age : ; #N30310NA
 1D to 18Y : 7.6-48.6 ; 7.6-48.6
 19Y to 150Y : 1.2-50.7 ; 1.2-50.7

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MML MML Test setup information

ORDER CODE	EFF DATE	TC	TITLE	Checking Normals	Print normals (# coded)	Perform Site *
-----	-----	----	-----	-----	-----	-----
89220	(continued)					
		30310	CD38+ IgM+ % of CD19+ B cells (continued)			
			MALE			
			No age	:		; #N30310NA
			1D to 18Y	:	7.6-48.6	; 7.6-48.6
			19Y to 150Y	:	1.2-50.7	; 1.2-50.7
			FEMALE			
			No age	:		; #N30310NA
			1D to 18Y	:	7.6-48.6	; 7.6-48.6
			19Y to 150Y	:	1.2-50.7	; 1.2-50.7
			- - - - -			
		30312	CD21+ % of CD19+ B cells			
			Units: %			
			NO SEX			
			No age	:		; #N30312NA
			1D to 18Y	:	94.5-99.8	; 94.5-99.8
			19Y to 150Y	:	92.1-99.6	; 92.1-99.6
			MALE			
			No age	:		; #N30312NA
			1D to 18Y	:	94.5-99.8	; 94.5-99.8
			19Y to 150Y	:	92.1-99.6	; 92.1-99.6
			FEMALE			
			No age	:		; #N30312NA
			1D to 18Y	:	94.5-99.8	; 94.5-99.8
			19Y to 150Y	:	92.1-99.6	; 92.1-99.6
			- - - - -			

30314 CD21- % of CD19+ B cells
 Units: %
 NO SEX
 No age : ; #N30314NA
 1D to 18Y : 0.2-5.5 ; 0.2-5.5
 19Y to 150Y : 0.2-8.6 ; 0.2-8.6
 MALE
 No age : ; #N30314NA
 1D to 18Y : 0.2-5.5 ; 0.2-5.5
 19Y to 150Y : 0.2-8.6 ; 0.2-8.6
 FEMALE
 No age : ; #N30314NA
 1D to 18Y : 0.2-5.5 ; 0.2-5.5
 19Y to 150Y : 0.2-8.6 ; 0.2-8.6

30297 CD19+
 Units: cells/mcL
 NO SEX
 No age : ; #N30297
 1D to 18Y : 92.0-792.0 ; 92.0-792.0
 19Y to 150Y : 90.0-539.0 ; 90.0-539.0
 MALE
 No age : ; #N30297
 1D to 18Y : 92.0-792.0 ; 92.0-792.0
 19Y to 150Y : 90.0-539.0 ; 90.0-539.0

(continued next page)

MML MML Test setup information

ORDER CODE -----	EFF DATE ----	TC ----	TITLE -----	Checking Normals -----	Print normals (# coded) -----	Perform Site * -----
89220 (continued)			30297 CD19+ (continued)			
			FEMALE			
			No age :		; #N30297	
			1D to 18Y :	92.0-792.0	; 92.0-792.0	
			19Y to 150Y :	90.0-539.0	; 90.0-539.0	

			29095 CD20+			
			Units: cells/mcL			
			NO SEX			
			No age :		; #N29095	
			1D to 18Y :	85.0-767.9	; 85.0-767.9	
			19Y to 150Y :	95.0-580.8	; 95.0-580.8	
			MALE			
			No age :		; #N29095	
			1D to 18Y :	85.0-767.9	; 85.0-767.9	
			19Y to 150Y :	95.0-580.8	; 95.0-580.8	
			FEMALE			
			No age :		; #N29095	

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                1D to 18Y      : 85.0-767.9          ; 85.0-767.9
                19Y to 150Y   : 95.0-580.8          ; 95.0-580.8
- - - - -
30299  CD27+
        Units: cells/mcL
        NO SEX
        No age      :                               ; #N30299
        1D to 18Y   : 9.4-136.0                    ; 9.4-136.0
        19Y to 150Y : 18.0-145.0                    ; 18.0-145.0
        MALE
        No age      :                               ; #N30299
        1D to 18Y   : 9.4-136.0                    ; 9.4-136.0
        19Y to 150Y : 18.0-145.0                    ; 18.0-145.0
        FEMALE
        No age      :                               ; #N30299
        1D to 18Y   : 9.4-136.0                    ; 9.4-136.0
        19Y to 150Y : 18.0-145.0                    ; 18.0-145.0
- - - - -
30301  CD27+ IgM+ IgD+
        Units: cells/mcL
        NO SEX
        No age      :                               ; #N30301
        1D to 18Y   : 0.8-42.7                      ; 0.8-42.7
        19Y to 150Y : 4.0-85.0                      ; 4.0-85.0
        MALE
        No age      :                               ; #N30301
        1D to 18Y   : 0.8-42.7                      ; 0.8-42.7
        19Y to 150Y : 4.0-85.0                      ; 4.0-85.0
        FEMALE
        No age      :                               ; #N30301
        1D to 18Y   : 0.8-42.7                      ; 0.8-42.7
        19Y to 150Y : 4.0-85.0                      ; 4.0-85.0
- - - - -

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MML MML Test setup information

ORDER CODE	EFF DATE	TC	TITLE	Checking Normals	Print normals (# coded)	Perform Site *
-----	-----	---	-----	-----	-----	-----
89220	(continued)		30303 CD27+ IgM- IgD-			
			Units: cells/mcL			
			NO SEX			
			No age	:		; #N30303
			1D to 18Y	:	5.2-74.2	; 5.2-74.2
			19Y to 150Y	:	7.0-61.0	; 7.0-61.0
			MALE			
			No age	:		; #N30303
			1D to 18Y	:	5.2-74.2	; 5.2-74.2
			19Y to 150Y	:	7.0-61.0	; 7.0-61.0

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                FEMALE
                No age      :                ; #N30303
                1D to 18Y   : 5.2-74.2      ; 5.2-74.2
                19Y to 150Y : 7.0-61.0      ; 7.0-61.0
- - - - -
30305  CD27+ IgM+ IgD-
        Units: cells/mcL
        NO SEX
        No age      :                ; #N30305
        1D to 18Y   : 0.8-37.8          ; 0.8-37.8
        19Y to 150Y : 0.0-12.0          ; 0.0-12.0
        MALE
        No age      :                ; #N30305
        1D to 18Y   : 0.8-37.8          ; 0.8-37.8
        19Y to 150Y : 0.0-12.0          ; 0.0-12.0
        FEMALE
        No age      :                ; #N30305
        1D to 18Y   : 0.8-37.8          ; 0.8-37.8
        19Y to 150Y : 0.0-12.0          ; 0.0-12.0
- - - - -
30307  IgM+
        Units: cells/mcL
        NO SEX
        No age      :                ; #N30307
        1D to 18Y   : 46.0-596.0        ; 46.0-596.0
        19Y to 150Y : 37.0-327.0        ; 37.0-327.0
        MALE
        No age      :                ; #N30307
        1D to 18Y   : 46.0-596.0        ; 46.0-596.0
        19Y to 150Y : 37.0-327.0        ; 37.0-327.0
        FEMALE
        No age      :                ; #N30307
        1D to 18Y   : 46.0-596.0        ; 46.0-596.0
        19Y to 150Y : 37.0-327.0        ; 37.0-327.0
- - - - -
30309  CD38+ IgM-
        Units: cells/mcL
        NO SEX
        No age      :                ; #N30309
        1D to 18Y   : 8.2-275.1          ; 8.2-275.1

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MML MML Test setup information

ORDER CODE	EFF DATE	TC	TITLE	Checking Normals	Print normals (# coded)	Perform Site *
89220	(continued)	30309	CD38+ IgM- (continued)	19Y to 150Y : 7.0-153.0	; 7.0-153.0	
			MALE			

	No age	:		;	#N30309
	1D to 18Y	:	8.2-275.1	;	8.2-275.1
	19Y to 150Y	:	7.0-153.0	;	7.0-153.0
	FEMALE				
	No age	:		;	#N30309
	1D to 18Y	:	8.2-275.1	;	8.2-275.1
	19Y to 150Y	:	7.0-153.0	;	7.0-153.0
	- - - - -				
30311	CD38+ IgM+				
	Units: cells/mcL				
	NO SEX				
	No age	:		;	#N30311
	1D to 18Y	:	14.2-229.6	;	14.2-229.6
	19Y to 150Y	:	2.0-139.4	;	2.0-139.4
	MALE				
	No age	:		;	#N30311
	1D to 18Y	:	14.2-229.6	;	14.2-229.6
	19Y to 150Y	:	2.0-139.4	;	2.0-139.4
	FEMALE				
	No age	:		;	#N30311
	1D to 18Y	:	14.2-229.6	;	14.2-229.6
	19Y to 150Y	:	2.0-139.4	;	2.0-139.4
	- - - - -				
30313	CD21+				
	Units: cells/mcL				
	NO SEX				
	No age	:		;	#N30313
	1D to 18Y	:	89.4-780.1	;	89.4-780.1
	19Y to 150Y	:	85.0-533.0	;	85.0-533.0
	MALE				
	No age	:		;	#N30313
	1D to 18Y	:	89.4-780.1	;	89.4-780.1
	19Y to 150Y	:	85.0-533.0	;	85.0-533.0
	FEMALE				
	No age	:		;	#N30313
	1D to 18Y	:	89.4-780.1	;	89.4-780.1
	19Y to 150Y	:	85.0-533.0	;	85.0-533.0
	- - - - -				
30315	CD21-				
	Units: cells/mcL				
	NO SEX				
	No age	:		;	#N30315
	1D to 18Y	:	0.9-25.5	;	0.9-25.5
	19Y to 150Y	:	0.3-22.0	;	0.3-22.0
	MALE				
	No age	:		;	#N30315
	1D to 18Y	:	0.9-25.5	;	0.9-25.5

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ORDER CODE	EFF DATE	TC	TITLE	Checking Normals	Print normals (# coded)	Perform Site *
89220	(continued)					
		30315	CD21- (continued)			
			19Y to 150Y	: 0.3-22.0	; 0.3-22.0	
			FEMALE			
			No age	:	; #N30315	
			1D to 18Y	: 0.9-25.5	; 0.9-25.5	
			19Y to 150Y	: 0.3-22.0	; 0.3-22.0	
		30316	Interpretation			
			TEST CODE ALWAYS MESSAGE - [ZASR]			
			ZASR 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.			
89009	10/8/2007		CD40 by Flow, QL, B			MCR
			Transport temp : Ambient\Refrig <96 hours OK\Frozen NO			
		89009	CD40 by Flow, QL			
			TEST CODE ALWAYS MESSAGE - [ZASR]			
			ZASR 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.			
82964	4/25/2008		X-Linked Hyper IgM Syndrome, B			MCR
			Transport temp : Refrig\Ambient OK\Frozen NO			
		82964	CD40 Ligand Expression			
			NO SEX			
			All Ages :		; Present	
			MALE			
			All Ages :		; Present	
			FEMALE			
			All Ages :		; Present	
			TEST CODE ALWAYS MESSAGE - [ZASR]			
			ZASR 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.			
		29040	CD40muIg (Function)			
			NO SEX			
			All Ages :		; Present	
			MALE			
			All Ages :		; Present	
			FEMALE			

All Ages :

; Present

23901 Interpretation
(continued next page)

MML MML Test setup information

ORDER CODE	EFF DATE	TC	TITLE	Checking Normals	Print normals (# coded)	Perform Site *
89220	(continued)	23901	Interpretation (continued)			
			NO SEX			
			All Ages :		; #N23901	
			MALE			
			All Ages :		; #N23901	
			FEMALE			
			All Ages :		; #N23901	
			TEST CODE ALWAYS MESSAGE - [ZASR]			
			ZASR 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.			

*Performing Site Legend

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

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*** End of Report ***

MML Messages used as normals

CODE	TEXT
N23901	Not consistent with Hyper IgM Syndrome
N29094	4.2-24.1 (<=18 y) 3.2-16.8 (>18 y)
N29095	85.0-767.9 (<=18 y)

95.0-580.8 (>18 y)

N30296NA

4.3-23.2 (<=18 y)
2.8-17.4 (>18 y)

N30297

92.0-792.0 (<=18 y)
90.0-539.0 (>18 y)

N30298NA

4.6-49.1 (<=18 y)
6.3-52.8 (>18 y)

MML

Messages used as normals

CODE TEXT

N30299

9.4-136.0 (<=18 y)
18.0-145.0 (>18 y)

N30300NA

0.2-12.0 (<=18 y)
1.7-29.3 (>18 y)

N30301

0.8-42.7 (<=18 y)
4.0-85.0 (>18 y)

N30302NA

1.9-30.4 (<=18 y)
2.3-26.5 (>18 y)

N30303

5.2-74.2 (<=18 y)
7.0-61.0 (>18 y)

N30304NA

0.3-13.1 (<=18 y)
0.0-5.3 (>18 y)

N30305

0.8-37.8 (<=18 y)
0.0-12.0 (>18 y)

N30306NA

32.8-82.6 (<=18 y)
26.0-78.0 (>18 y)

N30307

46.0-596.0 (<=18 y)
37.0-327.0 (>18 y)

N30308NA

2.9-51.8 (<=18 y)
4.1-42.2 (>18 y)

N30309

8.2-275.1 (<=18 y)
7.0-153.0 (>18 y)

N30310NA

7.6-48.6 (<=18 y)

 1.2-50.7 (>18 y)

 N30311 14.2-229.6 (<=18 y)
 2.0-139.4 (>18 y)

 N30312NA 94.5-99.8 (<=18 y)
 92.1-99.6 (>18 y)

 N30313 89.4-780.1 (<=18 y)
 85.0-533.0 (>18 y)

 N30314NA 0.2-5.5 (<=18 y)
 0.2-8.6 (>18 y)

 N30315 0.9-25.5 (<=18 y)
 0.3-22.0 (>18 y)

MML
 12:09 PM

Messages used as normals

CODE	TEXT
-----	-----
N3316	53-84 (0-2 mo) 51-77 (3-5 mo) 49-76 (6-11 mo) 53-75 (12-23 mo) 56-75 (2-5 y) 60-76 (6-11 y) 56-84 (12-17 y) 59-83 (18-55 y) 49-87 (>55 y)

N3318	6-32 (0-2 mo) 11-41 (3-5 mo) 14-37 (6-11 mo) 16-35 (12-23 mo) 14-33 (2-5 y) 13-27 (6-11 y) 6-23 (12-17 y) 6-22 (18-55 y) 3-20 (>55 y)

N3319	35-64 (0-2 mo) 35-56 (3-5 mo) 31-56 (6-11 mo) 32-51 (12-23 mo) 28-47 (2-5 y) 31-47 (6-11 y) 31-52 (12-17 y)

31-59 (18-55 y)
32-67 (>55 y)

N3320

12-28 (0-2 mo)
12-23 (3-5 mo)
12-24 (6-11 mo)
14-30 (12-23 mo)
16-30 (2-5 y)
18-35 (6-17 y)
12-38 (18-55 y)
8-40 (>55 y)

N3322

2500-5500 (0-2 mo)
2500-5600 (3-5 mo)
1900-5900 (6-11 mo)
2100-6200 (12-23 mo)
1400-3700 (2-5 y)
1200-2600 (6-11 y)
1000-2200 (12-17 y)
677-2383 (18-55 y)
617-2254 (>55 y)

CODE

TEXT

N3324

300-2000 (0-2 mo)
430-3000 (3-5 mo)
610-2600 (6-11 mo)
720-2600 (12-23 mo)
390-1400 (2-5 y)
270-860 (6-11 y)
110-570 (12-17 y)
99-527 (18-55 y)
31-409 (>55 y)

N3325

1600-4000 (0-2 mo)
1800-4000 (3-5 mo)
1400-4300 (6-11 mo)
1300-3400 (12-23 mo)
700-2200 (2-5 y)
650-1500 (6-11 y)
530-1300 (12-17 y)
424-1509 (18-55 y)
430-1513 (>55 y)

N3326

560-1700 (0-2 mo)
590-1600 (3-5 mo)
500-1700 (6-11 mo)
620-2000 (12-23 mo)
490-1300 (2-5 y)

370-1100 (6-11 y)
330-920 (12-17 y)
169-955 (18-55 y)
101-839 (>55 y)

N4054 4-18 (0-2 mo)
 3-14 (3-5 mo)
 3-15 (6-23 mo)
 4-17 (2-11 y)
 3-22 (12-17 y)
 6-27 (18-55 y)
 6-35 (>55 y)

N4055 170-1100 (0-2 mo)
 170-830 (3-5 mo)
 160-950 (6-11 mo)
 180-920 (12-23 mo)
 130-720 (2-5 y)
 100-480 (6-11 y)
 70-480 (12-17 y)
 101-678 (18-55 y)
 110-657 (>55 y)

NN3321 0.66-4.60 (0-17 y)
 0.99-3.15 (18-55 y)
 1.00-3.33 (>55 y)

Total of 34 normals codes

*** End of Report ***