

IMMUNE DEFICIENCY PANEL 1

(Flow Cytometry)

PARAMETER	RESULT	UNITS	REFERENCE RANGE
Absolute Lymphocyte Count		/ uL	
B Lymphocytes			
CD19 (Total B cells)		%	
Absolute CD19		/uL	
T Lymphocytes			
CD3 (Total T cells)		%	
Absolute CD3		/uL	
CD4 (Helper T cells)		%	
Absolute CD4		/uL	
CD8 (Suppressor T cells)		%	
Absolute CD8		/uL	
CD4 / CD8		Ratio	
Natural Killer Cells			
CD3 ⁻ / CD (16 + 56)		%	1-23
Absolute CD3 ⁻ / CD (16 + 56)		/uL	19-450

Note: 1. Test conducted on EDTA / Heparin whole blood. ACD samples not accepted

2. There is a progressive increase in CD4 count throughout the day while CD8 and CD19 counts increase between 8.30 am to 12 noon. NK cell counts are constant throughout the day

Clinical Use

- For enumeration of lymphocyte subsets
- For evaluating and monitoring HIV positive patients
- For monitoring patients undergoing bone marrow transplants with peripheral stem cell products and chemotherapy
- For followup of patients on immunosuppressive therapy like in cases of solid organ transplants. Failure to respond to therapy is demonstrated by a slow but steady rise in T cells.

Absolute Lymphocyte Count	Age Group	Reference Range in /uL	Age Group (to be given to IT)
	0 to 17 years	660 - 4600	>= 0 < 18 years
	18 to 55 years	990 - 3150	>= 18 years < 55 years
	> 55 years	1000- 3330	>= 55 years
CD3 (T Cells) Percent	Age Group	Reference Range in %	
	0 - 2 months	53 - 84	>= 0 < 3 months
	3 - 5 months	51 - 77	>= 3 months < 6 months
	6 - 11 months	49 - 76	>= 6 months < 12 months
	12 months - 2 years	53 - 75	> =12 months < 2 years
	2 - 5 years	56 - 75	> =2 years <6 years
	6 - 11 years	60 - 76	> =6 years < 12 years
	12 - 17 years	56 - 84	>= 12 years < 18 years
	18 - 55 years	59 - 83	>=18 years < 55 years
	> 55 years	49 - 87	>= 55 years
Absolute CD3 (T Cells)	Age Group	Reference Range in /uL	
	0 - 2 months	2500 - 5500	>= 0 < 3 months
	3 - 5 months	2500 - 5600	>= 3 months < 6 months
	6 - 11 months	1900 - 5900	>= 6 months < 12 months
	12 months - 2 years	2100 - 6200	> =12 months < 2 years
	2 - 5 years	1400 - 3700	> =2 years <6 years
	6 - 11 years	1200 - 2600	> =6 years < 12 years
	12 - 17 years	1000 - 2200	>= 12 years < 18 years
	18 - 55 years	677 - 2383	>=18 years < 55 years
	> 55 years	617 - 2254	>= 55 years
CD4 (Helper T Cells) Percent	Age Group	Reference Range in %	
	0 - 2 months	35 to 64	>= 0 < 3 months
	3 - 5 months	35 to 56	>= 3 months < 6 months
	6 - 11 months	31 to 56	>= 6 months < 12 months
	12 months - 2 years	32 to 51	> =12 months < 2 years
	2 - 5 years	28 to 47	> =2 years <6 years
	6 - 11 years	31 to 47	> =6 years < 12 years

	12 - 17 years	31 to 52	>= 12 years < 18 years
	18 - 55 years	31 to 59	>=18 years < 55 years
	> 55 years	32 to 67	>= 55 years
Absolute CD4 (Helper T Cells)	Age Group	Reference Range in /uL	
	0 - 2 months	1600 - 4000	>= 0 < 3 months
	3 - 5 months	1800 - 4000	>= 3 months < 6 months
	6 - 11 months	1400 - 4300	>= 6 months < 12 months
	12 months - 2 years	1300 - 3400	> =12 months < 2 years
	2 - 5 years	700 - 2200	> =2 years <6 years
	6 - 11 years	650 - 1500	> =6 years < 12 years
	12 - 17 years	530 - 1300	>= 12 years < 18 years
	18 - 55 years	424 - 1509	>=18 years < 55 years
	> 55 years	430 - 1513	>= 55 years
CD8 (Suppressor T Cells)Percent	Age Group	Reference Range in %	
	0 - 2 months	12 to 28	>= 0 < 3 months
	3 - 5 months	12 to 23	>= 3 months < 6 months
	6 - 11 months	12 to 24	> =6 months < 12 months
	12 months - 2 years	14 to 30	> = 12 months < 2 years
	2 - 5 years	16 to 30	> =2 years < 6 years
	6 - 17 years	18 to 35	> = 6 years < 18 years
	18 - 55 years	12 to 38	>=18 years < 55 years
	> 55 years	8 to 40	>= 55 years
Absolute CD8 (Suppressor T Cells)	Age Group	Reference Range in /uL	
	0 - 2 months	560 - 1700	>= 0 < 3 months
	3 - 5 months	590 - 1600	>= 3 months < 6 months
	6 - 11 months	500 - 1700	>= 6 months < 12 months
	12 months - 2 years	620 - 2000	> =12 months < 2 years
	2 - 5 years	490 - 1300	> =2 years <6 years
	6 - 11 years	370 - 1100	> =6 years < 12 years
	12 - 17 years	330 - 920	>= 12 years < 18 years
	18 - 55 years	169 - 955	>=18 years < 55 years

	> 55 years	101 - 839	>= 55 years
CD4 / CD8 Ratio		> = 1.00	
CD 19 (B Cells) Percent	Age Group	Reference Range in %	
	0 - 2 months	6 to 32	>= 0 < 3 months
	3 - 5 months	11 to 41	>= 3 months < 6 months
	6 - 11 months	14 to 37	>= 6 months < 12 months
	12 months - 2 years	16 to 35	> =12 months < 2 years
	2 - 5 years	14 to 33	> =2 years <6 years
	6 - 11 years	13 to 27	> =6 years < 12 years
	12 - 17 years	6 to 23	>= 12 years < 18 years
	18 - 55 years	6 to 22	>=18 years < 55 years
	> 55 years	(3-20)	>= 55 years
Absolute CD 19 (B Cells)	Age Group	Reference Range in /uL	
	0 - 2 months	300 - 2000	>= 0 < 3 months
	3 - 5 months	430 - 3000	>= 3 months < 6 months
	6 - 11 months	610 - 2600	>= 6 months < 12 months
	12 months - 2 years	720 - 2600	> =12 months < 2 years
	2 - 5 years	390 - 1400	> =2 years <6 years
	6 - 11 years	270 -860	> =6 years < 12 years
	12 - 17 years	110 - 570	>= 12 years < 18 years
	18 - 55 years	99 - 527	>=18 years < 55 years
	> 55 years	31 - 409	>= 55 years
Natural Killer Cells % (CD16+ CD56)	Age Group	Reference Range in %	
	0 - 2 months	4 to 18	>= 0 < 3 months
	3 - 5 months	3 to 14	>= 3 months < 6 months
	6 months- 2 years	3 to 15	>= 6 months < 2 years
	2 - 11 years	4 to 17	> = 2 years < 12 years
	12 - 17 years	3 to 22	>= 12 years < 18 years
	18 - 55 years	6 to 27	>=18 years < 55 years
	> 55 years	6 to 35	>= 55 years

Natural Killer Cells Absolute (CD16+ CD56)	Age Group	Reference Range in /uL	
	0 - 2 months	170 - 1100	>= 0 < 3 months
	3 - 5 months	170 - 830	>= 3 months < 6 months
	6 - 11 months	160 - 950	>= 6 months < 12 months
	12 months - 2 years	180 - 920	> =12 months < 2 years
	2 - 5 years	130 - 720	> =2 years <6 years
	6 - 11 years	100 - 480	> =6 years < 12 years
	12 - 17 years	70 - 480	>= 12 years < 18 years
	18 - 55 years	101 - 678	>=18 years < 55 years
	> 55 years	110 - 657	>= 55 years

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