

Characteristics	Neutrophil	Lymphocyte	Monocyte	Eosinophil	Basophil	Plasma cell
Meaning of name	Affiliation for neutral color	Cell of lymph system	1 large nucleus	Affiliation to eosin (red) color	Affiliation to basic color	Develop from naïve B cells
Size	4 RBCs	1-2 (small)	6-7 RBCs	3-5 RBCs	3-5 RBCs	2-3 RBC
Nucleus	3-4 lobes (segmented)	Large purple nucleus	Horseshoe shaped	Bilobed	Bilobed	Centered towards border (eccentric), perinuclear halo close to nucleus (Golgi body), purple
Chromatin pattern	Coarse	Coarse	Lacey, ground-glass appearance (vacuoles)	Coarse	Condensed	Condense/coarse, basophilic cytoplasm
Granules	Fine, pink-purple	-	-	Coarse, orange-red	Coarse, large, dark-purple	Coarse
N:C	1:2	5:1-2:1	4:1-2:1	1:3	1:2-1:3	2:1-1:1
Life span	6-10 hours	3 days in spleen and lymph nodes 3 weeks in BM	Only a few days (6-8 days)	2-5 days	1-2 days	3-5 days
Function	Phagocytosis	T cell: cell-mediated immunity B cell: Humoral immunity, Ab production (IgG, IgM, IgA, IgE, IgD)	Phagocytosis, APC, cytokine production	IgE-mediated allergic disorders, parasitic infections	Anti-inflammatory mediator, releases IL-4 which functions in hypersensitivity reactions	Secretes Ab Functions in humoral immunity
Reference range	$2-7 \times 10^9$ 40-80%	$1-3 \times 10^9$ 20-40%	$0.2-1 \times 10^9$ 2-10%	$0.02-0.5 \times 10^9$ 1-6%	$0.02-0.1 \times 10^9$ <1-2%	2-3% in BM