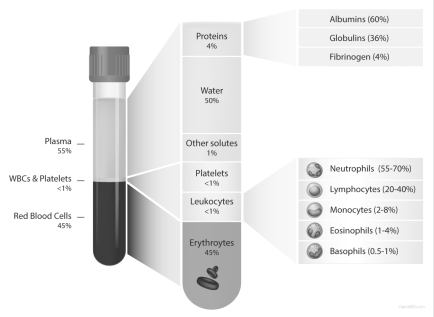
IMPORTANT REMINDERS

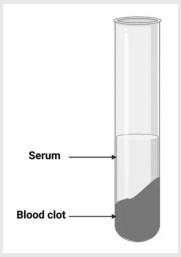
Serum	Blood **W/O** cells or Fibrinogen (clotting factor)
Plasma	Blood **W** Fibrinogen and water but ~ still **NO** cells
Buffy Coat	Separated blood layer containing WBCs and Platelets
MHC	Major Histocompatibility Complex
TCR	T-Cell receptor
BCR	B-Cell receptor

PLASMA ~ in EDTA tube (purple top)



- Anti-Coagulants are needed for purifying
- Can be prepared as soon as its centri-fuged
- **Fibrinogen = present**
- Buffy coat can contaminate the liquidated fraction
- Composed of ions that is *representative of the circulating blood!*
- Less stable

SERUM ~ Red-Top Tube



- No Anticoagulants added
- 30 min delay for clot formation
- Fibrinogen absent
- Cleaner sample (lacks depleted cells and cell remnants)
- Contains antibodies, antigens, electrolytes and medications, hormones and microorga-nisms
- The study of serology involves the study of the serum as the GS

ANTIBODY CLASSES

CLASS	DESCRI-PTION	NOTES
IgG	Neutra-lizing Ab	mnemonic > "*grandmas memory*"
	!Made later in immune response!	
	Primary Ab in *memory response*	
	Found in blood	
	Small size (able to pass barriers easily)	
	☐☐Highest in conc. in **Colost-rum/Blood**	

ANTIBODY CLASSES (cont)

	Longer half-life than IgM	
	Bind phagocytes via **Fc region**	*Opsonin*
IgM	☐☐ **First Ig** in primary response	mnemonic > "*I want MINE first*"
	Short half-life	
	10 binding sites	> better **at aggregating than IgG**
		> **Neutralizing Ab**
	Large size	> can't penetrate tissue
		> confined to blood/lymph
	Activates *Compliment System*	
	☐☐ **High conc. ==**	**recent primary exposure**
	No **Fc receptor** for IgM on phagocytes	*CANNOT* act as an opsonin
IgA	**!Important for mucosal protec-tion!**	mnemonic > "*Alpacas are snotty*"
	Dimeric form	> has a **secretory piece**
		~ prevents degradation by Proteases

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ANTIBODY CLASSES (cont)

		~☐☐ **secreted in MILK! (NOT ABSORBED THRU GUT)**
	☐☐ Prevents epithelial adherence of bacti	
	Helps protect **neonate mucosa in:**	> GIT
		> respiratory
		> UG tract
	Found in:	> tears, saliva, and bile
IgE	☐☐ **!Important in adaptive resp. to *parasitic worms!***	mnemonic > '*Ew worms and allergies*"
	☐☐ **Mediates Type-1 HS**	> **Anaphylactic Shock**
	Mechanism::	1. **B-cells >** make IgE to Ag
		2. **IgE >** binds *Mast cells* on their **Fc region**
		Once exposed to Ag again:
		3. **IgE >** binds *Mast cells*
		~ ☐☐Activates *degranulation*

ANTIBODY CLASSES (cont)

4. **Mast cells >** ☐☐release *histamine* & vasoactive amines

Neonatal Immunity

	COLOSTRUM	MILK
Source of Ab	Dam's serum	Mammary gland
Ig Compos-ition	IgG (high conc.)	IgA (much smaller conc.)
**Prod.		

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