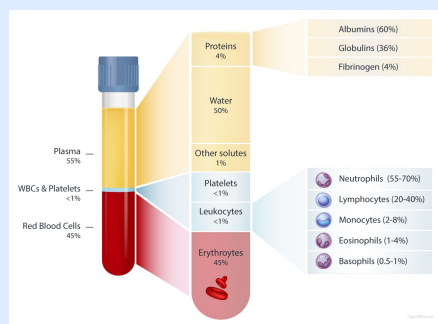


### IMPORTANT REMINDERS

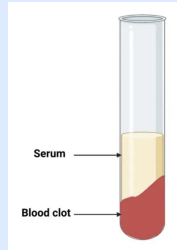
<b>Serum</b>	Blood <b>W/O</b> cells or Fibrinogen (clotting factor)
<b>Plasma</b>	Blood <b>W</b> Fibrinogen and water but ~ still <b>NO</b> cells
<b>Buffy Coat</b>	Separated blood layer containing WBCs and Platelets
<b>MHC</b>	Major Histocompatibility Complex
<b>TCR</b>	T-Cell receptor
<b>BCR</b>	B-Cell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

### PLASMA ~ in EDTA tube (purple top)



- Anti-Coagulants are needed for purifying
- Can be prepared as soon as its centrifuged
- **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 microorganisms
- The study of serology involves the study of the serum as the GS

### ANTIBODY CLASSES

CLASS	DESCR- PTION	NOTES
<b>IgG</b>	Neutra- lizing Ab	mnemonic > " <i>grandmas memory</i> "  <b>!Made later in immune response!</b>  <b>Primary Ab in memory response</b>  Found in blood  Small size (able to pass barriers easily)  <input type="checkbox"/> <input type="checkbox"/> Highest in conc. in <b>Colost- rum/Blood</b>

### ANTIBODY CLASSES (cont)

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



### ANTIBODY CLASSES (cont)

~   secreted in  
**MILK! (NOT  
 ABSORBED  
 THRU GUT)**

Prevents epithelial adherence of  
 bacti

Helps protect > GIT  
**neonate  
 mucosa in:**

> respiratory

> UG tract

Found in: > tears, saliva,  
 and bile

**IgE**   **!Important** mnemonic > '*Ew*  
 in adaptive resp. worms and  
 to *parasitic* allergies"  
*worms!*

**Mediates** > **Anaphylactic**  
**Type-1 HS 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
<b>Source of Ab</b>	Dam's serum	Mammary gland
<b>Ig Compos- ition</b>	IgG (high conc.)	IgA (much smaller conc.)

\*\*Prod.



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Page 2 of 2.

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