CONCEPT: ANTIGENS

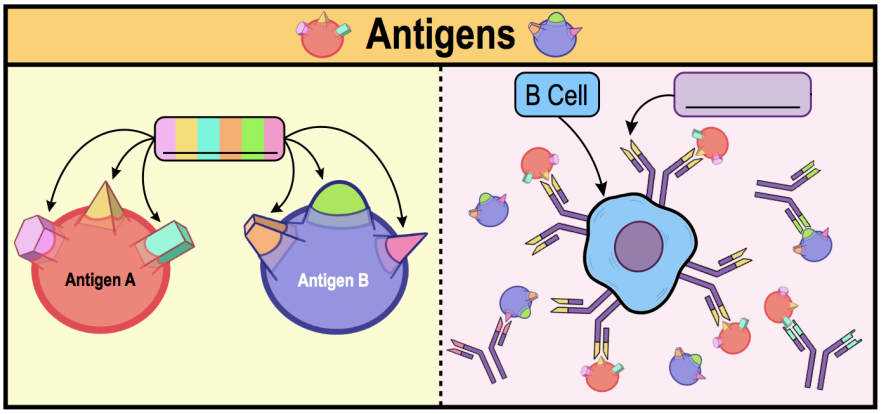
●Adaptive Immunity (*cell-mediated & humoral*) generates immune responses toward foreign _____ in the body.

□ **Antigens:** molecules reacting *specifically* with T cells, B cells, or antibodies (derived from **anti**body **gen**erator).

□ Differ in their effectiveness to elicit an immune response (small antigens usually not *immunogenic*).

□ **Immunogenic Antigens:** any antigen that causes a *strong* _____ response.

□ **Epitopes:** distinct regions of *antigens* that B cell & T cell receptors or antibodies directly _____ to.



PRACTICE: Epitopes are:

a) A portion of an antibody molecule.

b) A portion of antigen recognized by antibody.

c) T cell receptors.

d) A molecule that binds to antigens.

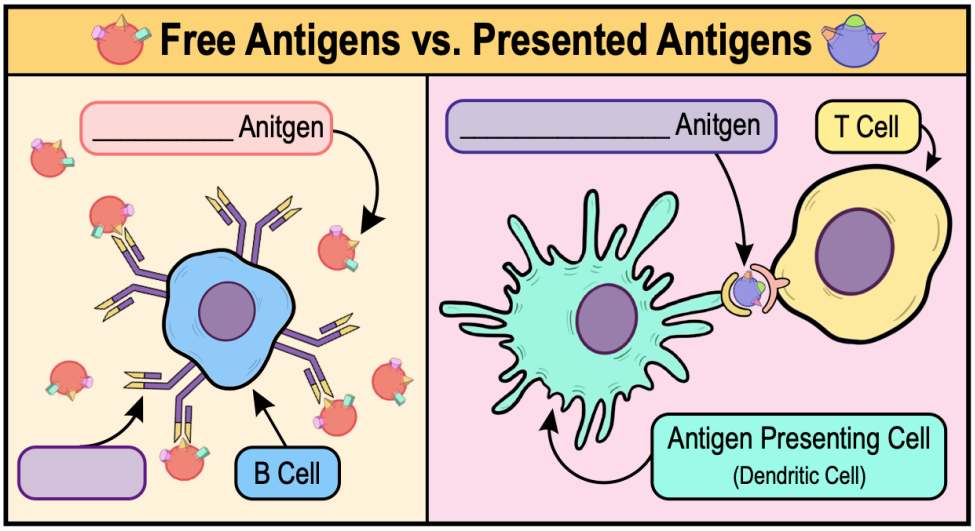
Free Antigens vs. Presented Antigens on APCs

●____ cells only respond to *free* antigens (antigens NOT presented by a host cell).

●____ cells only respond to antigens that are *presented* on *antigen presenting cells.*

□ **Antigen Presenting Cells (_____s):** specific immune cells that process & *present* antigens for T cell activation.

□ APCs are *dendritic cells, macrophages,* & *B-cells.*



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PRACTICE: Which of the following cell types are antigen-presenting cells (APCs).

1. Macrophages 2. Neutrophils 3. B cells 4. T cells 5.Plasma Cells

a) 1 & 3.
b) 4 & 5.
c) 1, 2 & 3.
d) 1 & 2.
e) 3 & 4.

PRACTICE: Many phagocytic immune cells such as macrophages and dendritic cells commonly engulf foreign or dangerous materials in the body. If these cells engulf antigens, the cells will present the antigens on their surface. Which immune cells will respond to these "presented" antigens and trigger an immune response if necessary?

a) B cells.
b) Plasma cells.
c) T cells.
d) Monocytes.