

Matching

Match the immune cell with its description:

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|---|-----------------------------|
| _____ 1. Effector cells that kill tumor cells, virally infected cells.
Do not need to recognize a specific antigen before being activated. Programmed to automatically kill foreign cells. | |
| _____ 2. Found in tissues where antigens enter the body and in the peripheral lymph tissue. Grab antigens and carry them to lymph nodes. | A) Effector cells |
| _____ 3. Migrate from blood to tissues and mature into major phagocytes. | B) T-Lymphocytes |
| _____ 4. Activated to engulf and digest antigens that contact their cell membranes. Enzymes inside then destroy the pathogen. Play a role in the inflammatory response. | C) Antigen presenting cells |
| _____ 5. Activate other T and B cells, control viral infections, reject foreign tissues, respond in cell mediated immunity. | D) Monocytes |
| _____ 6. Activated to divide into many plasma cells, respond to specific antigens, produce antibodies to destroy pathogens. | E) Macrophages |
| _____ 7. Accessory cells that process antigens into epitopes that can be recognized by lymphocytes | F) B-Lymphocytes |
| _____ 8. Cells produced to eliminate the pathogen. | G) Natural killer cells |
| | H) Dendritic cells |

Short Answer

1. List as many substances that you can that might function as an antigen

Match the description with the appropriate type of immune response:

- | | |
|--|---------------------------|
| _____ 1. Mediated by B lymphocytes | |
| _____ 2. Defense against extracellular microbes and toxins | |
| _____ 3. Eliminates intracellular pathogens | |
| _____ 4. Mediated by T-lymphocytes | A) Humoral immunity |
| _____ 5. Uses antibody producing plasma cells | B) Cell mediated immunity |
| _____ 6. Develop receptors which recognize viruses and signals the destruction of infected cells | |
| _____ 7. Antibodies circulate and destroy microbes | |

Short answer:

2. Distinguish between innate and adaptive immunity

Match the class of antibody with its name:

- | | |
|---|--------|
| _____ 1. Found on the cell membranes of B-lymphocytes, initiates the differentiation of B-cells | |
| _____ 2. Macromolecule, can't cross the placenta, is the first antibody to appear in response to antigen, first antibody made by newborns | A) IgE |
| _____ 3. Most abundant antibody, also called gamma globulin, only antibody that can cross placenta, passes immunity from mother to child. | B) IgM |
| _____ 4. Found in saliva, tears, and other secretions, defense against local infections in mucosal tissues. | C) IgG |
| _____ 5. Involved in the inflammatory response, allergic reactions and combating parasitic infections. Triggers the release of histamine in allergic responses. | D) IgA |
| | E) IgD |

Short Answer:

3. Using the terms "antigen binding site" and "epitope" explain how an antibody is like a lock and key when it determines which antigen to destroy.

4. Describe the role of the Major Histocompatibility Complex in organ transplant rejection.

5. List and explain the 5 steps involved in the activation of an immune response.

1.

2.

3.

4.

5.

6. List the four major lymphoid structures and give their functions.

7. Discuss the role of haptens in an allergic response.

Why are some people allergic to some substances while other people are not?

8. Distinguish between T and B lymphocytes.

B

T

Origin

Where mature

Function

	<u>B</u>	<u>T</u>
Origin		
Where mature		
Function		

- _____1. Typical in response to microorganisms, mediated by specific sensitive T-lymphocytes.
- _____2. Life threatening hypersensitivity reaction, widespread vasodilation causes a drop in blood pressure, and airway constriction.
- _____3. Occurs when immunologically competent cells are transplanted into a recipient who is immunologically compromised.
- _____4. Abnormality in one or more branches of the immune system that renders a person susceptible to diseases normally protected by an intact immune system.
- _____5. IgE mediated hypersensitivity reaction that begins within minutes of antigen challenge.
Allergic reactions.
- _____6. Breakdown in the ability of the immune system to differentiate between self and non-self antigens.
- _____7. Immune cells of transplant recipient attack the donor cells of the transplanted organ.
- _____8. Mediated by formation of insoluble antigen-antibody complexes, localized inflammation, usually in blood vessels. Vasculitis.
- _____9. Profound immunosuppression with associated opportunistic infections, malignancies, and CNS degeneration.
- _____10. IgE or IgM mediated – result from mismatched blood transfusions, ABO, Rh incompatibility, erythroblastosis fetalis.
- _____11. Sneezing, itchy, watery discharge from eyes and nose. Hay fever.

- A) Type II Antibody Mediated Hypersensitivity
- B) Type IV Cell Mediated Hypersensitivity
- C) Autoimmune disease
- D) Anaphylaxis
- E) Allergic Rhinitis
- F) Type I Immediate Hypersensitivity
- G) Host-Versus-Graft-Disease
- H) Type III Immune Complex Mediated Hypersensitivity
- I) Immunodeficiency disorders
- J) Acquired Immunodeficiency syndrome
- K) Graft-Versus-Host-Disease