

SPECIFIC IMMUNITY

ANTIGENS

WHAT ARE THEY?

PROTEINS

ANTIGENIC DETERMINANT (EPITOPES)

ANTIBODIES

GENERAL CONCEPTS

ANTIBODY STRUCTURE

CHAINS

HEAVY

LIGHT

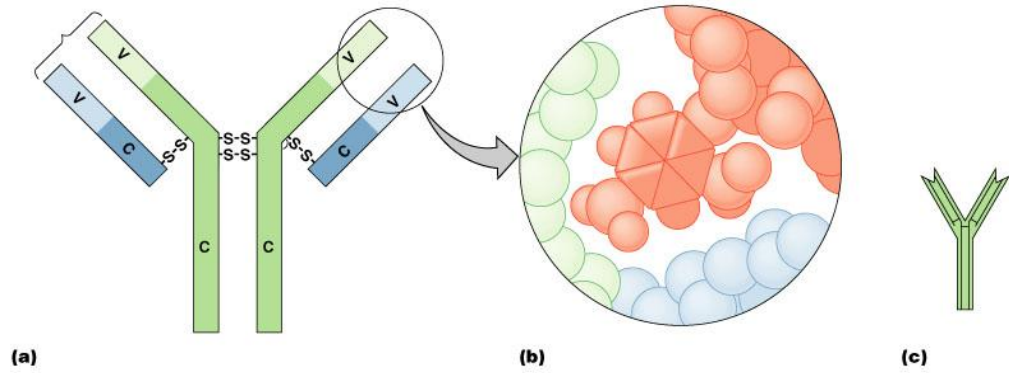
REGIONS

CONSTANT

VARIABLE

ANTIGEN BINDING SITE

Fc PORTION



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ANTIBODY CLASSES DIFFERENT HEAVY CHAINS

IgG

FOUND IN

FUNCTIONS

IgM

STRUCTURE

FOUND IN

FUNCTIONS

IgA

STRUCTURE

FOUND IN

FUNCTIONS

IgE

FOUND ON

FUNCTION

IgD

FOUND ON

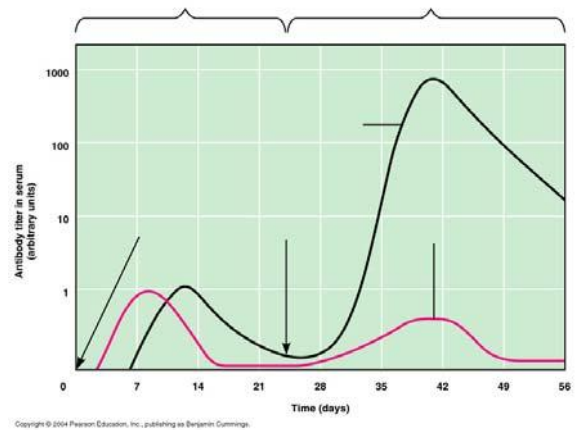
FUNCTION

ANTIBODY PRODUCTION

PHASES

PRIMARY RESPONSE

SECONDARY RESPONSE



ANTIGEN-ANTIBODY REACTIONS

BINDING – “LOCK AND KEY”

NEUTRALIZATION

AGGLUTINATION

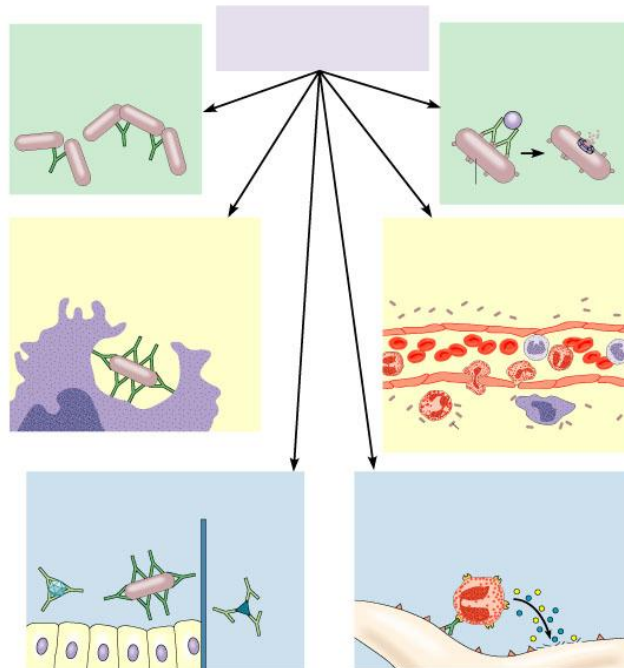
PRECIPITATION

F_c BINDING BASED REACTIONS

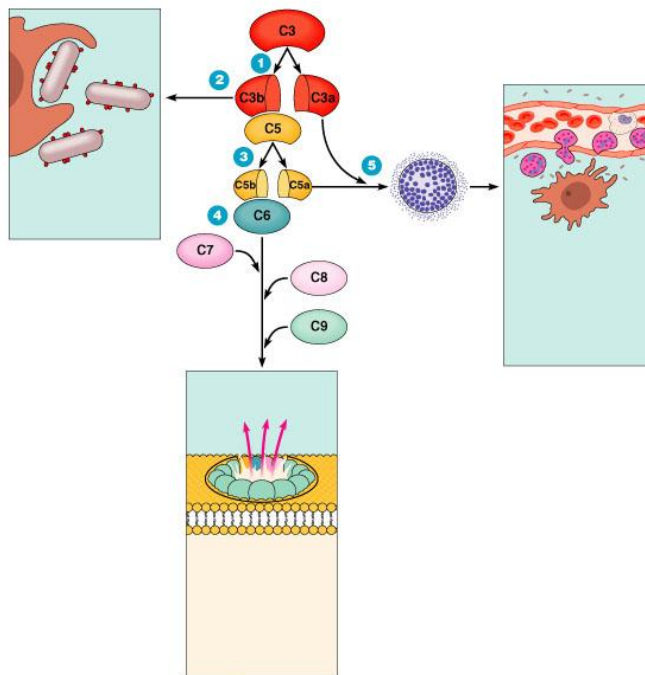
OPSONIZATION

ANTIBODY-DEPENDENT CELLULAR CYTOTOXICITY (ADCC)

COMPLEMENT ACTIVATION



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COMPLEMENT

GENERAL CONCEPTS

ACTIVATION PATHWAYS
CLASSICAL

ALTERNATIVE & LECTIN

ANAPHYLATOXINS

MEMBRANE ATTACK COMPLEX (MAC)

HISTOCOMPATIBILITY
GENERAL CONCEPTS

HLA ANTIGENS

USES

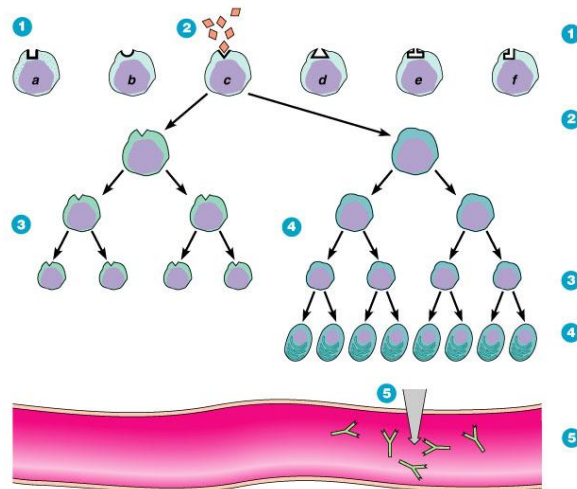
IMMUNOBIOLOGY

CELL ORIGINS T CELLS

B CELLS

CLONAL SELECTION GENERAL CONCEPTS – ANTIGEN RECEPTORS

THE PROCESS – EFFECTOR CELLS & MEMORY CELLS



HUMORAL IMMUNITY

CELLS INVOLVED

B CELLS

PLASMA CELLS

MECHANISMS

CELLULAR IMMUNITY

CELLS INVOLVED

MECHANISMS

CELL TYPES

HELPER T CELLS

SUPPRESSOR T CELLS

CYTOTOXIC T CELLS

CYTOKINES

OVERVIEW OF AN INTEGRATED SYSTEM

