Hydrophobic Amino Acids: **nonpolar**, has carbon-rich side chains, do not interact well with water

Hydrophilic Amino Acids: **polar**, interact well with water

Charged Amino Acids: interact with oppositely charged amino acids or other molecules

**Biological Functions:**

Structural Support: Keratin: Found in skin, hair, and fingernails, providing structural integrity.

Hormonal Regulation: Insulin: A hormone that controls carbohydrate metabolism by acting as a chemical messenger.

Catalysis: DNA Polymerase: An enzyme that catalyzes the replication of DNA, essential for cell division.

Transport: Hemoglobin: Transports oxygen in the blood.

Defense: Antibodies: Proteins that help the immune system identify and neutralize foreign invaders like bacteria and viruses.

Storage: Ferritin: Stores iron in the liver.

Movement: Actin and Myosin: Involved in muscle contraction.

**Amino Acids:**

Alanine

Cysteine

Aspartate

Glutamate

Phenylalanine

Glycine

Histidine

Isoleucine

Lysine

Leucine

Methionine

Asparagine

Proline

Glutamine

Arginine

Serine

Threonine

Valine

Tryptophan

Tyrosine

**Size:**

Small

Tiny