



Glossary

Term	Meaning
Adenyl cyclase	An enzyme in the plasma membrane that produces cAMP from ATP.
Antiporters.	A type of transporter that binds two or more ions or molecules and transports them in opposite directions.
ATP	A nucleotide that is an energy source.
Catalyst	It speeds up the rate of the chemical reaction without being used up.
Cyclic AMP (cAMP)	cyclic adenosine monophosphate, a small second messenger that is derived from ATP via adenyl cyclase.
Diacylglycerol (DAG):	A secondary messenger and cleavage product of PIP ₂ used for signalling within the plasma membrane.
Dimer:	A chemical compound formed when two molecules (e.g., receptor proteins) join together to form a functional complex. The process known as dimerization.
Enzyme	A protein that speeds up a chemical reaction in a cell.
Enzyme-linked receptor	A receptor that is found in all living species that has two domain: extracellular domain which bind to signalling molecule and intracellular domain for catalytic domain.
G-protein	Intracellular protein that binds to guanosine triphosphate (GTP) and guanosine diphosphate (GDP) that participate in signalling pathways.
Hormone	A chemical messenger that is produced in a structure called a gland and travels via blood to initiate response on target cell.
Inositol phospholipid:	A lipid molecule that has a inositol (a carbohydrate) as its hydrophilic head group. It can act as a secondary messenger and is present at small concentrations in the plasma membrane.



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Inositol triphosphate (IP ₃):	A secondary messenger and cleavage product of PIP ₂ used for signalling within the cell.
Kinase:	An enzyme that catalyzes the transfer of a phosphate group from ATP to another molecule by a process called phosphorylation.
Lipid	insoluble fat molecule made of hydrogen and carbon atoms.
Methylation	The addition of the methyl group (CH ₃)
Second messenger	A small, non-protein molecule that transmits a signal from the plasma membrane to the cytosol of a cell after activation of a receptor causes its release. It relays signals
Signal transduction/cascade	Transmission of the signal through the cytoplasm of the cell to produce a response. Sometimes the nucleus.
Signalling molecule	Also known as ligand that binds to its specific receptor.
Symporters	A type of transporter that binds two or more ions or molecules and transports them in same direction.
Uniporters	A type of transporter that binds a single molecule or ion and transports it across the membrane.