essential cell biology



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Enzyme-linked Receptors

GTP-binding Protein Ras

a Fast Track to the Nucleus

Activated Receptor Tyrosine Kinases Assemble a

Complex of Intracellular Signaling Proteins

Protein Kinase Networks Integrate Information

Multicellularity and Cell Communication Evolved

Receptor Tyrosine Kinases Activate the

Some Enzyme-linked Receptors Activate

to Control Complex Cell Behaviors

Independently in Plants and Animals

Cell-Surface Receptors Fall into Three Main

Many Intracellular Signaling Proteins Act as

Stimulation of G-protein-linked Receptors

Some G Proteins Regulate Ion Channels

Some G Proteins Activate Membrane-bound

Signals into Electrical Ones

G-protein-linked Receptors

Activates G-Protein Subunits

Molecular Switches

Ion-channel-linked Receptors Convert Chemical

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