

DIMER $\beta\gamma$ OF G PROTEIN – SIGNALING MOLECULE

S u m m a r y

The extracellular signals received by receptors with seven membrane-spanning regions that activate the G proteins, are routed to several distinct intracellular pathways. The G proteins consist of two functional units, $G\alpha$ subunit, that binds guanine nucleotides and $G\beta\gamma$ dimer that functions as a single unit. The regulation of signal transduction by the $G\beta\gamma$ com-

plex at different protein interfaces: subunit – subunit, receptor – G protein, and $G\beta\gamma$ – effector, are reviewed. $G\beta\gamma$ dimer regulates over twelve cellular effectors including phospholipase- β , adenylyl cyclases, ion channels and G-protein coupled receptor kinases, which control a broad range of cellular processes.