

Abstract

Metabotropic Glutamate receptors are G- Protein coupled receptors for L-glutamate, an excitatory neurotransmitter. mGluR5 is a subtype of Group I mGluRs which plays a critical role in neuronal development, activity dependent synaptic plasticity and implicated in various neuropsychiatric disorders. mGluR5 undergoes endocytosis via two pathways- ligand-mediated and ligand independent or constitutive pathway. Previous study has shown that the mGluR5 receptors undergoing constitutive endocytosis, enter the recycling compartment and recycle back to the cell surface in HEK293 cells. Here I have studied the effect of serine/threonine protein phosphatase inhibitory drugs in the recycling process after constitutive endocytosis of mGluR5 to investigate the role of protein phosphatases, if any, in this pathway.