

Abstract

mGluR5b is a group 1 metabotropic glutamate receptor which belongs to the family of G-protein coupled receptors, responsible for mediating slower synaptic responses via second messenger pathway. mGluR5b present on the cell surface gets regulated by endocytosis which is a major component of either GPCR desensitization or resensitization or downregulation of the receptors. mGluR5b can get endocytosed in ligand-dependent as well as ligand independent (constitutive) manner. In this study, we have explored temporal regulation of the ligand-dependent and constitutive endocytosis pathways. Additionally we investigated the sub-cellular fate of the receptors subsequent to internalization. Our study suggests that mGluR5b enters into recycling compartment via constitutive endocytosis which is a slower process compared to ligand mediated endocytosis.