Mutagenesis of putative acylation sites alters function, localization, and accumulation of a Gi alpha subunit of the chestnut blight fungus Cryphonectria parasitica.

Title: Mutagenesis of putative acylation sites alters function, localization, and accumulation of a Gi alpha subunit of the chestnut blight fungus Cryphonectria parasitica.

Publication Type: Journal Article
Year of Publication: 1998
Authors: Gao, S, Nuss, DL
Journal: Mol Plant Microbe Interact
Volume: 11
Issue: 11
Pagination: 1130-5
Date Published: 1998 Nov
ISSN: 0894-0282
Keywords: Acylation, Ascomycota, Base Sequence, DNA Primers, Genetic Complementation Test, GTP-Binding Protein alpha Subunits, Gi-Go
Abstract: Targeted disruption of cpg-1, a gene encoding the G protein Gi alpha subunit, CPG-1, in the chestnut blight fungus, Cryphonectria parasitica, was performed. The disruption resulted in an absence of disease symptoms and a deficiency in the ability of the fungus to colonize host tissue. Analysis of the CPG-1 fusion protein indicated that the fusion protein was localized to the cytoplasm and peroxisomes, but was not detected in the nucleus. These results suggest that lipid modification is required for proper subcellular localization and function of CPG-1, and may be involved in post-transcriptional regulation of CPG-1 accumulation.
DOI: 10.1094/MPMI.1998.11.11.1130
PubMed ID: 9805400
Grant List: GM55981 / GM / NIGMS NIH HHS / United States