

# **Chikungunya Virus nsP3 Blocks Stress Granule Assembly by Recruitment of G3BP into Cytoplasmic Foci**

## **Abstract**

Chikungunya virus nonstructural protein nsP3 has an essential but unknown role in alphavirus replication and interacts with Ras-GAP SH3 domain-binding protein (G3BP). Here we describe the first known function of nsP3, to inhibit stress granule assembly by recruiting G3BP into cytoplasmic foci. A conserved SH3 domain-binding motif in nsP3 is essential for both nsP3-G3BP interactions and viral RNA replication. This study reveals a novel role for nsP3 as a regulator of the cellular stress response.