A virus-induced quasi-organelle for ribonucleoprotein complex sorting
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Within the VRC, ER- and Golgi-derived endomembranes (3b,c) as well as actin microfilaments (3a,b) encircle a characteristic protein aggregate known as ‘lamellar inclusion body’ or ‘beaded sheet’ which contains or consists of viral TGB1 protein (3d), RNA viruses replicate on host cell membranes. Uncapsidated single-stranded RNA (Pumilio BiFC) (3e,f,g) as well as double stranded RNA replication intermediates (5yto82) (3h) are also found around the TGB1 inclusions (3e), indicating virus replication happens there. Encapsidated virions and coat protein are found at the VRC periphery (3a,f,g) and do not overlap with the ‘naked’ RNA signal (3f,g).

The TGB1 protein organises the VRC

Without TGB1, no VRC is formed and significantly less virions accumulate.

The TGB1 inclusions are at the unlabeled center of the vRNA ‘whorls’

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