

ID No.	K3004
Project Title	Recognition of influenza virus by DNA sensors
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Report	
<p>We showed that viroporin activity of influenza virus M2 or encephalomyocarditis virus (EMCV) 2B protein triggers translocation of mtDNA into the cytosol in a MAVS-dependent manner. Although influenza virus-induced cytosolic mtDNA stimulated cGAS- and DDX41-dependent innate immune responses, the nonstructural protein 1 (NS1) of influenza virus associated with mtDNA to evade the STING-dependent antiviral immunity. The STING-dependent antiviral signaling was amplified in neighboring cells through gap junctions. In addition, we found that STING-dependent recognition of influenza virus is essential for limiting virus replication in vivo. These results show a mechanism by which influenza virus stimulates mtDNA release and highlight the importance of DNA sensing pathway in limiting influenza virus replication.</p>	