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Interaction of Tctex-1 cellular protein with 100K protein of bovine adenovirus type 3

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Adenovirus 100K is a non-structural protein involved in scaffolding and control of cellular translational machinery during the viral replication. To perform the varied functions, 100K protein must interact with various cellular and viral proteins during adenoviral life cycle. Very little information is available regarding the interaction of 100K with other proteins (viral/cellular) and their biological significance in case of bovine adenovirus type (BAdV)-3. Here, we attempted to identify new interacting protein partners of 100K protein of BAdV-3 during the infection of MDBK cells. Using yeast-two hybrid, GST-pull down and coimmunoprecipitation assays, we demonstrate that BAdV-3 100K protein interact with dynein cargo binding protein Tctex-1. Moreover, the amino acids 498-608 of 100K are involved in the interaction with Tctex-1. Currently, we are investigating the functional significance of this interaction in BAdV-3 infected cells using siRNA against Tctex-1.

Keywords: Bovine adenovirus type 3, 100K, Tctex-1, Protein-protein interaction