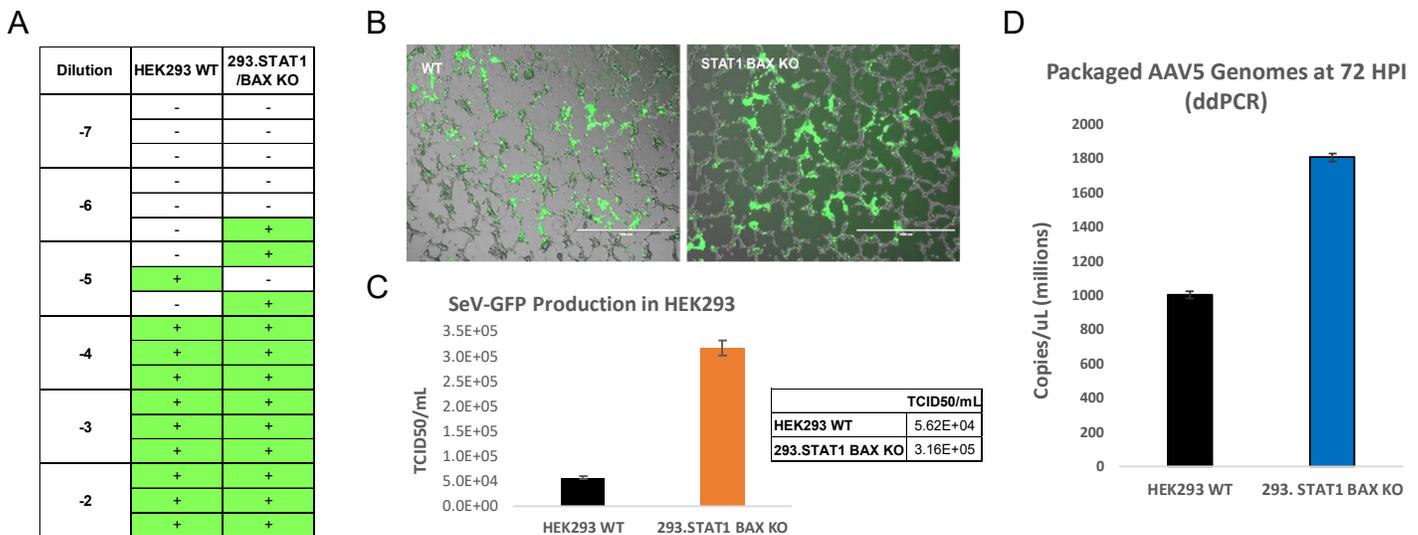


# Technical Data Sheet: 293.STAT1 BAX KO

<b>ATCC® Number</b>	CRL-1573-VHG™
<b>Organism</b>	<i>Homo sapiens</i> , Human
<b>Tissue/Disease Source</b>	Embryonic Kidney, normal
<b>Product Description</b>	This STAT1 BAX double knockout HEK293 cell line was derived from the parental 293[HEK-293] cell line (ATCC® CRL-1573™) at ATCC using CRISPR-Cas9 gene editing technology. This cell line carries short nucleotide insertions and deletions in both STAT1 gene and BAX gene. This cell line does not express STAT1 protein nor BAX protein.
<b>Application</b>	293.STAT1 BAX KO is an excellent cell model for virus propagation and viral vaccine production. It exhibits significant increased viral titer and enhanced virus production capability when compared to its parental cell line.

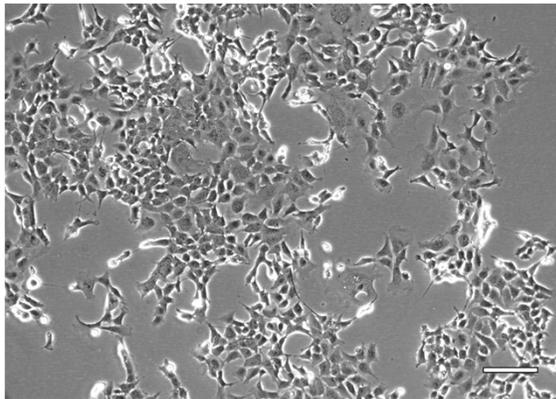
## Increased Viral Production in 293.STAT1 BAX KO Cells



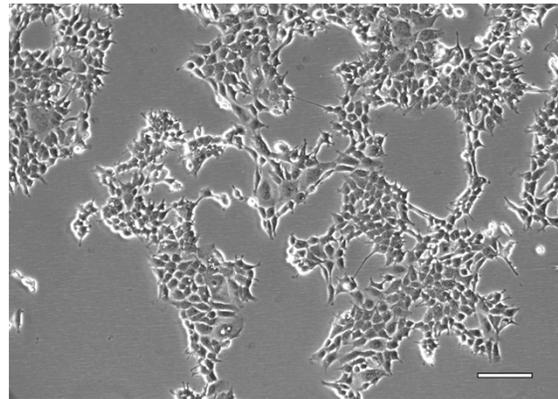
**Figure 1. Increased viral production in 293.STAT1 BAX cells.** (A) TCID<sub>50</sub> of GFP sendai viral supernatants produced by WT parental and 293.STAT1 BAX KO cells. Cells were infected with GFP Sendai virus at an MOI of 0.01. Supernatants were collected 48 hours after infection and used to re-infect WT HEK293 cells at the indicated dilution. (B) Cells were imaged 48 hours post GFP sendai viral infection. (C) TCID<sub>50</sub> of GFP sendai viral supernatants produced at 48h post infection were calculated. (D) Cells were transfected with AAV5 viral vector. Supernatants were collected 48 hours after transfection and used to re-infect WT HEK293 cells. Droplet digital PCR quantification of AAV5 viral genomes produced in WT parental and 293.STAT1 BAX KO cells at 72h post-infection.

## Cell Morphology

293 [HEK-293] (CRL-1573™)

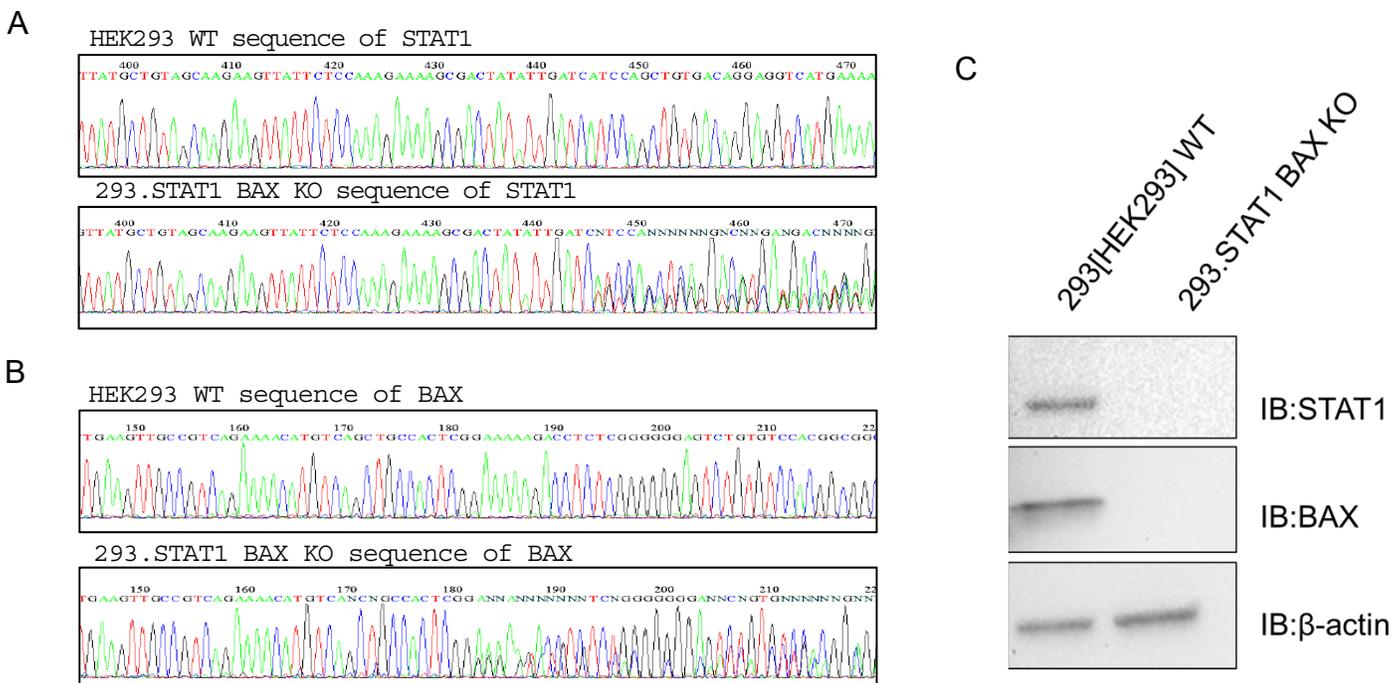


293.STAT1 BAX KO (CRL-1573-VHG™)



**Figure 2. Cell morphology of parental 293[HEK-293] and 293.STAT1 BAX KO cells.** Cells were maintained in ATCC recommended culture conditions to maximum recommended cell density and then imaged by light microscopy.

## Characterization of STAT1 Knockout



**Figure 3. Molecular characterization of 293.STAT1 BAX KO cells.** (A) Sanger sequencing of the STAT1 gene of 293.STAT1 BAX KO cells confirms STAT1 gene disruption. (B) Sanger sequencing of the BAX gene of 293.STAT1 BAX KO cells confirms BAX gene disruption. (C) STAT1 and BAX immunoblot of total cellular protein from parental HEK293 WT and 293.STAT1 BAX KO cells confirms absence of both STAT1 protein and BAX protein expression in 293.STAT1 BAX KO.