



## **Porcine circovirus (PCV) free Porcine Kidney epithelial cell line (PK-15)**

*Developed at National Institute of Animal Biotechnology, Hyderabad  
in collaboration with Central Agricultural University, Mizoram*

### **TECHNOLOGY AVAILABLE FOR TRANSFER**

#### **UNMET NEED AND OPPORTUNITY**

PK-15 cells are anchorage-dependent cells that originated from the kidney of an adult pig (*Sus scrofa*). The PK-15 cell line has been widely used in vaccine and drug development studies for different porcine viruses and diseases. The Porcine Kidney epithelial (PK-15) cell line (ATCC CCL-33) is positive for porcine circovirus (PCV) antigens and there is no commercial source of PCV-free PK15 cells. PCV-free PK15 cells are essential for studying the porcine viruses and for diagnostics and vaccine developments. The cell line development market was valued at US\$ 4,160.42 million in 2019 and is projected to reach US\$ 11,219.87 million by 2027; it is expected to grow at a CAGR of 13.3% from 2020 to 2027. The present technology therefore offers fair potential of market returns by catering to an unmet need for PCV free PK -15 cell line.

#### **APPLICATIONS**

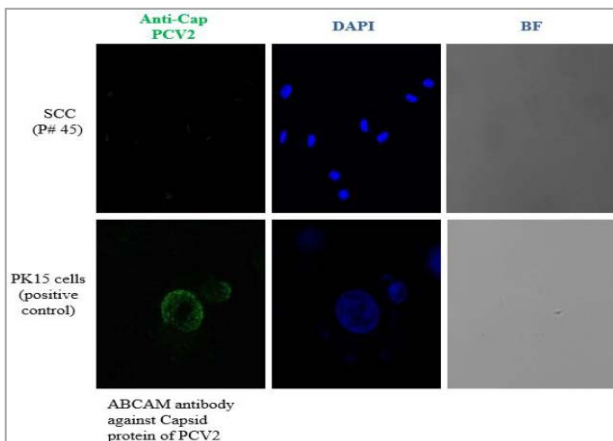
- Culture of viruses, to study viral biology and understand host response during virus infection
- For development of vaccines and diagnostics
- Porcine circoviruses diagnosis e.g. virus isolation, virus propagation, and virus neutralization tests

#### **UNIQUE SELLING PROPOSITION**

Porcine circovirus (PCV) free PK-15 cell line

#### **TECHNOLOGY**

The improved PK-15 cell line is a derivative of the PK15 cell line and is free of the porcine circovirus type 1 (PCV1). Single cell clones of PK15 cells were generated by limiting dilution method to obtain single cell clones devoid of PCV1. The cell line has been tested by PCR, western blot and immune cytochemistry methods to identify the presence or absence of PCV DNA and antigens.



*Immunofluorescence using anti PCV2 capsid antibody (also known to cross react with PCV1 capsid). Single cell clone P#45 tested negative for PCV capsid protein.*

#### **LICENSING OPPORTUNITY**

BCIL is looking for an industrial partner for commercialization of the cell line.

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