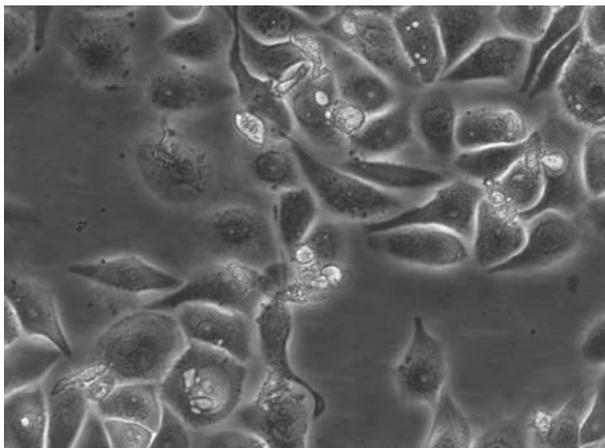


Cell line profile

Bob (ECACC catalogue no. [10021102](#))

Cell line history

Over 100 cases of prostate cancer are diagnosed every day in the United Kingdom. It is now the most common cancer in men with over 50,000 diagnoses annually. One of the most common treatments for prostate cancers is Androgen deprivation therapy (ADT) as prostate cancer cells usually require androgen hormones such as testosterone to grow. However, some prostate cancers, known as castration-resistant prostate cancer (CRPC), progress even after ADT. CRPC is defined by disease progression despite ADT and may present as either a continuous rise in serum prostate-specific antigen (PSA) levels, the progression of pre-existing disease, and/or the appearance of new metastases. There is therefore a need for in vitro models of CRPC for pre-clinical prostate cancer studies. Cell line Bob was the first spontaneously immortalized prostate cancer cell line to be established from a trans-rectal needle biopsy (TRBP) of a patient with castration-resistant prostate cancer (CRPC).



Key characteristics

Originally biopsies from 25 patients were collected. One of these, which subsequently became cell line Bob, spontaneously immortalised and survived CD133-screening. Bob is a novel pre-clinical model for functional studies in CRPC and especially for studying the CRPC "basal" phenotype. This cell line is cultured in serum-free culture medium. A derivative of Bob is also available i.e. SerBob, ECACC catalogue number 10021101, which has been adapted to medium containing serum. SerBob is more differentiated and invasive than Bob. The Y chromosome could not be detected in this cell line by short tandem repeat (STR)-PCR analysis when tested at ECACC. It is a known phenomenon that due to the increased genetic instability of cancer cell lines, the Y chromosome can be rearranged or lost resulting in lack of detection. The cell line is identical to the source provided by the depositor based on the STRPCR analysis.

Applications

This is the first spontaneously immortalised prostate cancer line to be established from a Trans-rectal needle biopsy (TRBP) of a patient with castration-resistant prostate cancer (CRPC). Bob and SerBob are novel pre-clinical models for functional studies in CRPC and especially for studying the CRPC basal phenotype.

Culture tips

Split sub-confluent cultures (70-80%) 1:5 to 1:20 i.e. seeding at $2-4 \times 10^4$ cells/cm² using 0.25% trypsin or trypsin/EDTA; 5% CO₂; 37°C. Cells must be centrifuged at 400 x g for 5 minutes to remove the trypsin at each subculture. Cells are cryopreserved in 45% conditioned media: 45% fresh media: 10% DMSO. At confluence $5-7 \times 10^4$ cells/cm² can be expected.

Key references

Attard G et al., (2009) A novel, spontaneously immortalized, human prostate cancer cell line, Bob, offers a unique model for pre-clinical prostate cancer studies. Prostate 69: 15071520 PMID: 19544327.

| Related cell lines | ECACC catalogue number | Description |
|--------------------|--------------------------|-----------------------|
| SerBob | 10021101 | Human Prostate cancer |