

## Cell line profile: OVPA8 (ECACC catalogue no. 19062601)

### Cell line history

OVPA8 cell line is derived from ascitic fluid from a 47-year-old platinum-treated patient with relapsed ovarian cancer (histologically confirmed high-grade serous ovarian cancer (HGSOC); adenocarcinoma papillare serosum, G3, FIGO IIIC). HGSOC is the most common histological type of ovarian cancer and typically has the poorest prognosis. However most ovarian cancer cell lines currently in use do not have clear histological origin and as such may not represent HGSOC. OVPA8 was generated to provide the research community with a new, well characterised model of HGSOC.

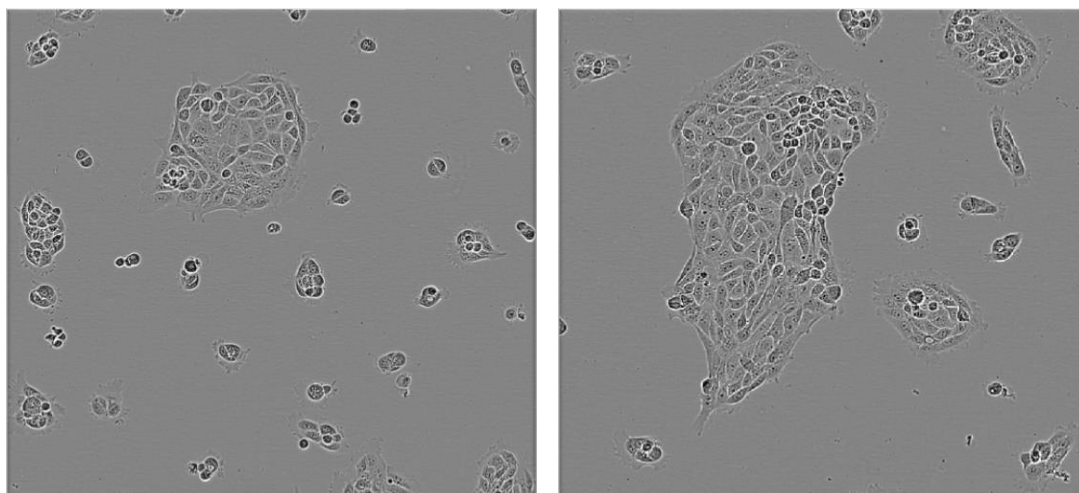


Figure 1. OVPA8 at early log phase (left), and mid log phase (right).

### Key characteristics

OVPA8 cells show morphologic and genetic features consistent with High-Grade Serious Ovarian Cancer, such as epithelial morphology, multiple chromosomal aberrations, TP53 mutation, BRCA1 mutation and loss of one copy of BRCA2. OVPA8 line has stable Short Tandem Repeat, (STR) profile over the course of multiple passages allowing easy identification by STR profiling. Cells have relatively low plating efficiency and have the ability to form spheroids. They have a low migration rate and intermediate invasiveness in Matrigel, as compared to other ovarian cancer cell lines. On treated plastic OVPA8 grows in island formations. OVPA8 is sensitive to paclitaxel (IC<sub>50</sub> = 0.001  $\mu$ M) and resistant to cisplatin (IC<sub>50</sub> = 16.27  $\mu$ M).

## Applications

OVPA8 was generated to offer a cell-based model system of human high-grade serious ovarian cancer for research use. Many other ovarian cancer cell lines are not as well characterised and, as such, do not necessarily phenotypically resemble this type of ovarian cancer.

## Culture Method

Medium. RPMI 1640 supplemented with 10% Foetal Bovine Serum and 2 mM L-glutamine.

## Subculture Routine

Split sub-confluent (70-80%) cultures using 1:3 to 1:6 ratio. Detach cells from culture plate using 1x PBS ( $\text{Ca}^{2+}/\text{Mg}^{2+}$ -free) for 30 s, then 0.05% Trypsin/EDTA for 8-10 min. Seed cells at  $1-2 \times 10^4/\text{cm}^2$ ; 5%  $\text{CO}_2$ ; 95% air at  $37^\circ\text{C}$ . Cell doubling time is approximately 40-44h.

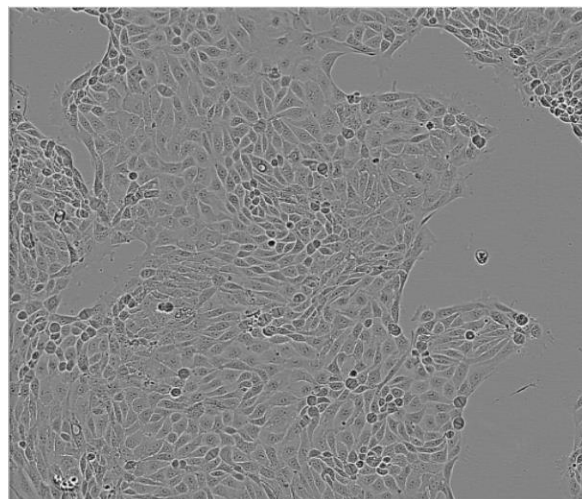


Figure 2. OVPA8 at late log phase.

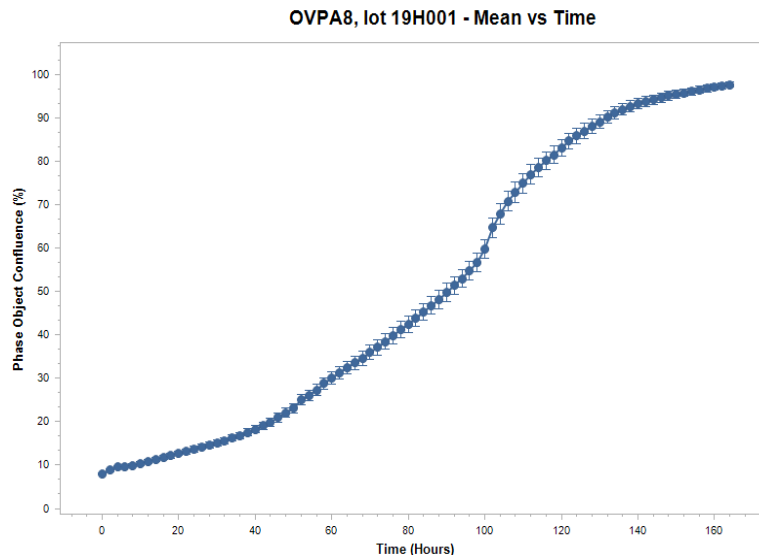


Figure 3. OVPA8 growth curve.

## Other Ovarian Cell lines

Name:	Description:	Accession Number/Link:
59M	Human ovarian tumour epithelial	<a href="#">89081802</a>
A2780	Human ovarian carcinoma	<a href="#">93112519</a>
A2780ADR	Human Caucasian ovarian carcinoma	<a href="#">93112520</a>
A2780cis	Human ovarian carcinoma	<a href="#">93112517</a>
COV318	Human ovarian epithelial-serous carcinoma, peritoneal ascites	<a href="#">07071903</a>
COV362	Human ovarian epithelial-endometroid carcinoma	<a href="#">07071910</a>
COV362.4	Human ovarian epithelial-endometroid carcinoma, pleural effusion	<a href="#">07071904</a>
COV413A	Human ovarian epithelial-serous carcinoma, sigmoid	<a href="#">07071905</a>
COV413B	Human ovarian epithelial-serous carcinoma, bladder dome	<a href="#">07071906</a>
COV434	Human ovarian granulosa tumour	<a href="#">07071909</a>
COV504	Human ovarian epithelial-serous carcinoma, pleural effusion	<a href="#">07071902</a>
COV644	Human ovarian epithelial-mucinous carcinoma, primary tumour	<a href="#">07071908</a>
OAW28	Human ovarian tumour epithelial	<a href="#">85101601</a>
OAW42	Human ovarian tumour epithelial	<a href="#">85073102</a>
OV17R	Human ovarian adenocarcinoma (ascites) stage III	<a href="#">96020763</a>
OV56	Human ovarian serous carcinoma (ascites) stage IV, poorly differentiated	<a href="#">96020759</a>
OV7	Human ovarian cancer, stage III	<a href="#">96020764</a>
PEA1	Human ovarian cancer; oestrogen receptor positive	<a href="#">10032306</a>
PEA2	Human ovarian cancer; oestrogen receptor positive	<a href="#">10032307</a>
PEO1	Human ovarian cancer; oestrogen receptor positive	<a href="#">10032308</a>
PEO1-CDDP	Human ovarian cancer; oestrogen receptor, drug resistance, cisplatin resistance	<a href="#">16012001</a>
PEO14	Human ovarian cancer; oestrogen receptor negative	<a href="#">10032311</a>
PEO16	Human ovarian cancer; oestrogen receptor negative	<a href="#">10032312</a>
PEO23	Human ovarian cancer; oestrogen receptor negative	<a href="#">10032313</a>
PEO4	Human ovarian cancer; oestrogen receptor positive	<a href="#">10032309</a>
PEO6	Human ovarian cancer; oestrogen receptor positive	<a href="#">10032310</a>

## Key reference

- Patrycja Tudrej, Magdalena Olbryt, Ewa Zembala-Nożyńska, Katarzyna A. Kujawa, Alexander J. Cortez, Anna Fiszer-Kierzkowska, Wojciech Pięłowski, Barbara Nikiel, Magdalena Głowala-Kosińska, Aleksandra Bartkowska-Chrobok, Andrzej Smagur, Wojciech Fidyk and Katarzyna M. Lisowska *Establishment and Characterization of the Novel High-Grade Serous Ovarian Cancer Cell Line OVPA8*: Int. J. Mol. Sci. 2018, 19(7), 2080