

Q&A ATCC® Excellence in Research Webinar “ATCC Breast Cancer Research Resources”

General Questions

1. Will we be able to download the presentation?

The recorded webinar presentation is available to watch on-demand on the ATCC website, or click [here](#).

2. Which cell line is better as an immunotherapy animal model, 4T1 or Eph4?

For immunotherapy, mouse mammary tumor cell lines are good models. However, the Eph4 cell line, as well as its derivatives, have more molecular signature data available than the 4T1 ([ATCC® CRL-2539™](#)), which may make them more useful for a molecularly-targeted study in combination with immunotherapy.

3. How is the term “triple-negative” defined with ATCC cell lines? For example, MDA-MB-468 may still have some level of Her2 expression, depending on the method of detection.

Although named triple-negative breast cancer (TNBC), this subtype of breast cancer refers to breast cancer cells that tested negative for estrogen receptors (ER), progesterone receptors (PR), and the lack of Her2 over-expression. In the case of Her2, it is not the complete lack of expression, but the lack of over-expression that is taken into account during testing. Therefore, some cell lines might still have detectable Her2 expression depending on the sensitivity of the detection method. However, the triple-negative breast cancer cell lines should not have over-expression of Her2 when compared to Her2 positive breast cancer cell lines such as BT-474 ([ATCC® HTB-20™](#)) cells or SK-BR-3 ([ATCC® HTB-30™](#)) cells.

4. Is ATCC planning on testing and specifying Her2-enriched triple-negative breast cancer separately? For example, public data has indicated that the HCC1937 cell line is Her2-enriched.

As Her2 status in triple-negative breast cancers are partially defined by the lack of Her2 over-expression, it is important that the cut-off level of Her2 expression is defined for relevant cell lines. Moving forward, ATCC plans on addressing this with our triple-negative breast cancer cell lines.

5. What p53 mutant cell lines are available from ATCC?

Currently, ATCC provides a number of p53 mutant cell lines. The ATCC p53 mutation cell line panels are composed of the most commonly used human cancer cell lines from breast, lung, colon, pancreatic, hematopoietic, and lymphoid tissues. Moreover, they cover p53 hotspot mutations at codons 175, 245, 248, 273, and 282. These panels are useful tools for the study of p53 function, wild-type p53 function reactivation, cancer

biology, and anti-cancer drug discovery. To view a full listing of these, please download a copy of our [p53 hotspot mutation brochure](#) and [Breast Cancer Resources Book](#).

6. Which cell line is better for use as a normal control, MCF 10A or hTERT-HME1?

Both the MCF 10A ([ATCC® CRL-10317™](#)) and the hTERT-HME1 ([ATCC® CRL-4010™](#)) cell lines are ideal for use as normal human mammary epithelial cell controls. The MCF 10 cells are spontaneously immortalized and derived from human fibrocystic mammary tissue (Soule HD et al. 1990), while the HME1 cells are immortalized by infection with the retrovirus pBabepuro-hTERT vector and cultured in complete growth medium containing puromycin until stable clones were selected. We recommend using both cell lines in your studies as the use of additional reference materials in your experiments can offer more reliable data.

7. Are 4T1 cells ER, PR, and Her2 positive or negative?

The classification of breast cancer cell lines as triple-negative is relatively new, and thus characterization has not been applied to all ATCC human breast cancer cell lines, or any mouse breast cancer cell line. Therefore, ATCC has not analyzed the 4T1 ([ATCC® CRL-2539™](#)) mouse breast cancer cell line for the expression of ER, PR, or Her2; however, we hope to address this in the near future.