

# Coming soon HCI-012 PDX

**Catalogue number:** 162080

**Tool type:**

## Contributor

**Inventor:** Alana L Welm, Yi-Chun Lin, Yoko Sakata DeRose

**Institute:** The University of Utah Research Foundation

**Images:**

## Tool details

**\*FOR RESEARCH USE ONLY**

**Name:** Coming soon HCI-012 PDX

**Alternate name:**

**Class:**

**Conjugate:**

**Description:** Please register your interest through the enquiry button (quote not currently available)

Human breast cancer-derived xenograft that retains high fidelity to original tumour and provides valuable resources for drug discovery and precision oncology. This panel of Patient Derived Xenografts provide models for some of the deadliest forms of breast cancer including drug-resistant, metastatic tumours, and endocrine-resistant estrogen receptor-positive (ER+) and HER2+ tumours.

Sample collected in 2009 from pleural effusion of Caucasian female, age 51 at time of collection with a primary diagnosis of IDC; 2000; recurrences in 2007 and 2008. Patient was a smoker for 14 years, and experienced clinical metastasis to the lymph node and pericardium. Patient had undergone radiation therapy to neck and lung (2009) and had systemic treatment of nab-paclitaxel; 5-fluorouracil; cyclophosphamide; aldesleukin/proleukin; interleukin 2; epirubicin, leucovorin, methotrexate; letrozole (2006 - 2009); doxorubicin (2009); capecitabine (2009), trastuzumab, vinorelbine (2009), capecitabine and lapatinab (2009) prior to sample collection. Patient characteristics were as follows - ER status: negative, PR status: negative, HER2 status: primary tumour was positive and amplified; PE not tested. PDX characteristics were as follows - ER status: negative, PR status: negative, HER2 status: positive, mixed. PDX information: PAM50 subtype is luminal B/HER2-enriched, PTEN negative by IHC, and shows metastasis to lung, thymus, ovary, kidney, liver and lymph node.

**Purpose:**

**Parental cell:**

**Organism:**

**Tissue:**

**Model:**

**Gender:** Female

**Isotype:**

**Reactivity:**

**Selectivity:**

**Host:**

**Immunogen:**

**Immunogen UNIPROT ID:**

**Sequence:**

**Growth properties:**

**Production details:** Fresh or thawed human breast tumour fragments were implanted into the cleared inguinal mammary fat pad of female Immune-compromised mice. For bone metastasis samples, bone fragments were coimplanted. For liquid specimens, pleural effusion, or ascites fluid, 1-2 milion cells were injected into cleared mammary fat pads in Matrigel. For ER+ tumours, mice were dosed with E2 beeswax pellets and given supplemental E2 via drinking water. When tumours reached 1-2 cm in diameter, tumours were aseptically collected and reimplanted into new mice or banked. Estrogen-independent ER+ breast PDX models were generated when ER+ PDX tumours were transplated into ovariectomized mice without E2 supplementation.

**Formulation:** Frozen explant from the xenografted tumour

**Recommended controls:**

**Bacterial resistance:**

**Selectable markers:**

**Additional notes:** Additional Information on PDX establishment:

<https://www.nature.com/articles/s43018-022-00337-6/figures/9>

## Patient details

**Cancer subtype:** Infiltrating Ductal Carcinoma

**Cancer stage/grade:** Stage IV

**Biopsy site:** Pleural Effusion Fluid

**Patient ethnicity:** Caucasian

**Treatment history:** Pretreated: Patient had undergone radiation therapy to neck and lung (2009) and had systemic treatment of nab-paclitaxel; 5-fluorouracil; cyclophosphamide; aldesleukin/proleukin; interleukin 2; epirubicin, leucovarin, methotrexate; letrozole (2006 - 2009); doxorubicin (2009); capecitabine (2009), trastuzumab, vinorelbine (2009), capecitabine and lapatinab (2009) prior to sample collection

## Engraftment details

**Mice passaged?:** Yes

**Engraftment site:** Cleared mammary fat pad

**Sample type:** Suspension in Matrigel

**Host strain:** Immunocompromised mice NOD scid gamma (NSG) Jackson Laboratory 5557; NOD/scid, Jackson Laboratory 1303 or NOD rag gamma (NRG), Jackson Laboratory 7799

**Histology:**

PAM50 subtype Luminal A Her2 enriched

**Genetic data:** Whole exome sequencing, SNP array, CNV data and RNA sequence from Guillen et al. 2022 Nature Cancer, is available in NIH database dbGaP under accession number phs002479.v1.p1

## Target details

**Target:**

**Target alternate names:**

**Target background:**

**Molecular weight:**

**Ic50:**

## Applications

**Application:**

**Application notes:**

## Handling

**Format:** Frozen explant from the xenografted tumour

**Concentration:**

**Passage number:**

**Growth medium:**

**Temperature:**

**Atmosphere:**

**Volume:**

**Storage medium:**

**Storage buffer:**

**Storage conditions:**

**Shipping conditions:**

## Related tools

**Related tools:**

## References

**References:**