

# ZR-75-1 [X-5] cell line

**Catalogue number:** 154564

**Sub-type:** Continuous

**Images:**

## Contributor

**Inventor:** Lambert Dorssers

**Institute:** Erasmus University Medical Center (Erasmus MC)

**Images:**

## Tool details

**\*FOR RESEARCH USE ONLY**

**Name:** ZR-75-1 [X-5] cell line

**Alternate name:**

**Class:**

**Conjugate:**

**Description:** Breast cancer is widely and effectively treated with endocrine treatment. However, in many cases the tumours will eventually progress into an estrogen-independent and therapy-resistant phenotype. Retroviral insertion mutagenesis was used to generate this cell line in order to elucidate the molecular mechanisms underlying endocrine therapy failure. Using this method the main genes conferring estrogen independence in human breast cancer cells were identified. Genes located in the immediate proximity of the retroviral integration site were characterised. Out of 15 candidate breast cancer antigen resistance (BCAR) genes, seven (AKT1, AKT2, BCAR1, BCAR3, EGFR2, GRB7 and TRERF1/BCAR2) were shown to directly underline estrogen independence. Cell line with a common Virus Integration Site, which may be responsible for estrogen independence: LOC338591 and additional integration in HK1 This cell line is part of a panel of 71 cell lines (Cat No 154549-154619) plus the parental (Cat No 154547). These cell lines are a powerful tool for studying the molecular and cellular mechanisms of breast tumour progression, therapy resistance and to test the effectiveness of novel drugs to combat different modes of anti-estrogen insensitivity.

**Purpose:**

**Parental cell:** ZR-75-1

**Organism:** Human

**Tissue:** Breast

**Model:** Cancer Model

**Gender:**

**Isotype:**

**Reactivity:**

**Selectivity:**

**Host:**

**Immunogen:**

**Immunogen UNIPROT ID:**

**Sequence:**

**Growth properties:**

**Production details:** ZR-75-1 cells were infected with amphotropic, defective murine retrovirus and plated in medium containing 1uM of 4-hydroxy-tamoxifen. Within 5 weeks after the start of selection proliferating colonies were individually picked and expanded to stable cell lines

**Formulation:**

**Recommended controls:**

**Bacterial resistance:**

**Selectable markers:**

**Additional notes:**

## Target details

**Target:** Breast cancer anti-estrogen resistance genes; LOC338591

**Target alternate names:**

**Target background:**

**Molecular weight:**

**Ic50:**

## Applications

**Application:**

**Application notes:** Cell line with a common Virus Integration Site, which may be responsible for estrogen independence: LOC338591 and additional integration in HK1

## Handling

**Format:** Frozen

**Concentration:**

**Passage number:**

**Growth medium:** RPMI 1640 medium supplemented with 10% heat-inactivated bovine calf serum (RBCS)

**Temperature:**

**Atmosphere:**

**Volume:**

**Storage medium:**

**Storage buffer:**

**Storage conditions:**

Liquid Nitrogen

**Shipping conditions:** Dry ice

## Related tools

**Related tools:**

## References

**References:** van Agthoven et al. 2009. Breast Cancer Res Treat. 114(1):23-30. PMID: 18351453.

CancerTools.org