

Human Breast Tumor Cell lines

Part of the CLS cell bank

CLS Cell Lines Service



Table 1: Human Breast cancer cell lines: Origin and General Characteristics

Name of cell line	Cell type	Organism, Ethnicity	Age / Gender	Tissue / Primary tumor	Morphology	Growth properties	CLS order no.
BT-20 ¹	Mammary carcinoma cell line	Homo sapiens (Human) / Caucasian	74 / Female	Breast / Invasive ductal carcinoma	Epithelial	Monolayer, adherent	300130
BT-474 ²	Mammary carcinoma cell line	Homo sapiens (Human) / Caucasian	60 / Female	Breast / Invasive ductal carcinoma	compact, slowly growing multi-layered colonies	Adherent	300131
BT-549 ³	Mammary carcinoma cell line	Homo sapiens (Human) / Caucasian	72 / Female	Breast / Invasive ductal carcinoma	Epithelial	Monolayer, adherent	300132
COLO-824 ⁴	Mammary carcinoma cell line	Homo sapiens (Human) / Caucasian	52 / Female	Breast / Mammary gland	Epithelial	Monolayer / Suspension	300463
HBL-100 ⁵	Mammary carcinoma cell line	Homo sapiens (Human) / Caucasian	27 / Female	Breast / Mammary gland	Epithelial	Monolayer, adherent	300178
MA-CLS-2 ⁶	Mammary carcinoma cell line	Homo sapiens (Human) / Caucasian	47 / Female	Breast / Pleural effusion, pT1 NO GII	Epithelial	Monolayer, adherent	300271
MCF-7 ⁷	Breast adenocarcinoma cell line	Homo sapiens (Human) / Caucasian	69 / Female	Breast / Invasive ductal carcinoma	Epithelial	Monolayer, adherent	300273
MX-1 ⁸	Mammary carcinoma cell line	Homo sapiens (Human) / Caucasian	74 / Female	Breast / Mammary gland	Epithelial	Monolayer, adherent	300296
SK-Br-3 ⁹	Breast adenocarcinoma cell line	Homo sapiens (Human) / Caucasian	43 / Female	Breast / Invasive ductal carcinoma	Epithelial	Monolayer, adherent	300333
T-47D ¹⁰	Mammary carcinoma cell line	Homo sapiens (Human) / Caucasian	54 / Female	Breast / Invasive ductal carcinoma	Epithelial	Monolayer, adherent	300353
ZR-75-1 ¹¹	Mammary carcinoma cell line	Homo sapiens (Human) / Caucasian	63 / Female	Breast / Mammary gland; metastatic site: ascites	Epithelial	Monolayer, adherent	300163

Table 2: Human Breast cancer cell lines: Special Features

Name of cell line	Cell type	Cell Marker	Tumor antigens	Mutations	Secretion of Cytokines	Ref ID in Cellosaurus ¹²	CLS order no.
BT-20 ¹	Mammary carcinoma cell line	HLA A1, Bw16 (+/-)	wnt4 +; wnt7h +	TP53 mut		RRID:CVCL_0178	300130
BT-474 ²	Mammary carcinoma cell line	HER-2/NEU+; ER+; PR+;		TP53 mut		RRID:CVCL_0179	300131
BT-549 ³	Mammary carcinoma cell line			TP53 mut		RRID:CVCL_1092	300132
COLO-824 ⁴	Mammary carcinoma cell line		p53 neg			RRID:CVCL_1136	300463
HBL-100 ⁵	Mammary carcinoma cell line	HLA A1, A10, A11, B7, B8				RRID:CVCL_4362	300178
MA-CLS-2 ⁶	Mammary carcinoma cell line					RRID:CVCL_4571	300271
MCF-7 ⁷	Mammary carcinoma cell line	ER+; PR+;	wnt7h +; Tx-4; p53 negative, pGP9.5 negative, CEA positive	TP53 wt	Insulin-like growth factor binding proteins (IGFBP) BP-2; BP-4; BP-5	RRID:CVCL_0031	300273
MX-1 ⁸	Mammary carcinoma cell line		p53 neg; Estrogen receptor neg.			RRID:CVCL_4774	300296
SK-Br-3 ⁹	Mammary carcinoma cell line	Blood Type A; Rh+; HLA A11, Bw22(+/-), B40, B18; HER-2/NEU+;	p53 pos;	TP53 mut		RRID:CVCL_0033	300333
T-47D ¹⁰	Mammary carcinoma cell line	ER+; PR+;		TP53 mut		RRID:CVCL_0553	300353
ZR-75-1 ¹¹	Mammary carcinoma cell line					RRID:CVCL_0588	300163

References:

1. Lasfargues EY, Ozello L. Cultivation of human breast carcinomas. J Natl Cancer Inst 21(6): 1131-1147, 1958.
2. Lasfargues EY et al. Isolation of two human tumor epithelial cell lines from solid breast carcinomas. J Natl Cancer Inst 61: 967-78, 1978.
3. Katayose Y et al. Promoting apoptosis: a novel activity associated with the Cyclin-dependent kinase inhibitor p27. Cancer Res 57: 5441-5, 1997.
4. Savelyeva L, Claas A, An H, Weber RG, Lichter P, Schwab M. Retention of polysomy at 9p23-24 during karyotypic evolution in human breast cancer cell line COLO 824. Genes Chromosomes and Cancer 24(1): 87-93, 1999.
5. Gaffney EV, Blackburn SE, Polanowski FP. The hormone response of secreting and non-secreting human breast cells in culture. In Vitro 12: 328-329, 1976.
6. No references have been published.
7. Soule HD et al. A human cell line from a pleural effusion derived from a breast carcinoma. J Natl Cancer Inst 51: 1409-16, 1973.
8. Ovejera AA et al. Chemotherapy of human tumor xenografts in genetically athymic mice. Ann Clin Lab Sci 8: 50-6, 1978.
9. Fogh J et al. Absence of HeLa cell contamination in 169 cell lines derived from human tumors. J Natl Cancer Inst 58: 209-14, 1977.
10. Keydar I et al. Establishment and characterization of a cell line of human breast carcinoma origin. Eur J Cancer 15: 659-70, 1979.
11. Engel LW et al. Establishment and characterization of three new continuous cell lines derived from human breast carcinomas. Cancer Res 38: 3352-64, 1978.
12. <http://web.expasy.org/cellosaurus/> - the cellosaurus represents a detailed data collection bank of a plethora of cell line relevant data from various cell banks.

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