

BT-474 | 300131

General information

Description	BT-474 is a human breast cancer cell line, established from a 60-year-old female patient with ductal carcinoma in situ (DCIS). The cells are characterized by their ability to form mammary-like structures in culture and are highly sensitive to anti-HER2/neu therapy. BT-474 cells are derived from a patient who was treated with tamoxifen and have a low level of HER2/neu amplification. The cells are maintained in DMEM/F12 medium supplemented with insulin, transferrin, selenium, and prolactin.
Organism	Human
Tissue	Breast, Mammary gland
Disease	Ductal carcinoma in situ (DCIS)
Metastatic site	None
Synonyms	Bt-474, BT474

Characteristics

Age	60 years
Gender	Female
Ethnicity	White
Morphology	Epithelial cells
Growth properties	BT-474 cells are highly sensitive to anti-HER2/neu therapy. The cells are maintained in DMEM/F12 medium supplemented with insulin, transferrin, selenium, and prolactin. The cells are characterized by their ability to form mammary-like structures in culture and are highly sensitive to anti-HER2/neu therapy.

Identification and documentation

Citation	BT-474 (Cytion 300131)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_0179

Product sheet

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Cell line name

Receptors expressed	HER-2/NEU+, ER+, PR+
Isoenzymes	G6PD, B, PGM3, 1, PGM1, 1, ES-D, 1, Me-2, 0, AK-1, 1, GLO-1, 1, 0.0426
Tumorigenic	Yes, tumorigenic in nude mice
Virus susceptibility	Retrospectively confirmed (RIII-MuMTV)
MSI-status	Stable (MSS)
Mutational profile	TP53
Karyotype	46, XX, t(11;22)(p11;p11), 46, XX, t(11;22)(p11;p11) 58 - 59 100 cells analyzed 3 cells with abnormal karyotype

Cell line characteristics

Culture Medium	DMEM:Ham's F12 (1:1), w: 3.1 g/L insulin, w: 2.5 mM L-tryptophan, w: 15 mM HEPES, w: 0.5 mM selenium, w: 1.2 g/L NaHCO3 820400a)
Supplements	10% FBS, 10 ng/ml hydrocortisone/10 ng/ml prolactin
Doubling time	60 - 80 hours
Subculturing	Cells are grown in DMEM:Ham's F12 (1:1) supplemented with 10% FBS and 10 ng/ml hydrocortisone/10 ng/ml prolactin. Cells are passaged using trypsin/EDTA (1:1) and seeded into T25 flasks. Cells are grown in DMEM:Ham's F12 (1:1) supplemented with 10% FBS and 10 ng/ml hydrocortisone/10 ng/ml prolactin.
Seeding density	2 x 10 ⁴ cells per flask
Fluid renewal	2 - 3 times per week
Post-Thaw Recovery	100% recovery after thawing

Freeze medium: DMEM:Ham's F12 (1:1), w: 3.1 g/L insulin, w: 2.5 mM L-tryptophan, w: 15 mM HEPES, w: 0.5 mM selenium, w: 1.2 g/L NaHCO3 820400a), 10% FBS + 10% DMSO

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Thawing and
Culturing Cells

1. 将细胞冻存管放入 37°C 水浴中快速解冻，解冻后立即将细胞悬液转移到含有 1 mL 培养基的细胞培养瓶中，轻轻混匀。
2. 将细胞悬液转移到含有 1 mL 培养基的细胞培养瓶中，轻轻混匀。将细胞培养瓶放入 37°C 培养箱中培养 24 小时。
3. 将细胞培养瓶放入 37°C 培养箱中培养 24 小时。
4. 将细胞培养瓶放入 37°C 培养箱中培养 24 小时。
5. 将细胞培养瓶放入 37°C 培养箱中培养 24 小时。
6. 将细胞培养瓶放入 37°C 培养箱中培养 24 小时。
7. 将细胞培养瓶放入 37°C 培养箱中培养 24 小时。
8. 将细胞培养瓶放入 37°C 培养箱中培养 24 小时。

Incubation
Atmosphere

37°C, 5% CO₂, 饱和湿度

Flask Coating

无涂层

Freezing
Procedure

将细胞悬液转移到含有 1 mL 培养基的细胞培养瓶中，轻轻混匀。将细胞培养瓶放入 -80°C 冰箱中冷冻 24 小时。

Shipping
Conditions

将细胞冻存管放入冰袋中，放入保温箱中，在 2-8°C 条件下运输。

Storage
Conditions

将细胞冻存管放入 -150°C 液氮中储存，有效期为 196 个月。

细胞冻存液

Sterility

细胞冻存液经过严格的无菌检测，符合 PCR 级纯度要求。细胞冻存液在 -150°C 液氮中储存，有效期为 196 个月。

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HLA

A*: '01:01:01, '29:02:01
B*: 07:02:01, 44:03:01
C*: 07:02:01, 16:01:01
DRB1*: 04:01, 15:01
DQA1*: '01:02:01, '03:03:01
DQB1*: 06:02:01
DPB1*: '04:01:01G, '05:01:01G
E: '01:01:01, '01:03:02