U87MG-RFP

305702

GENERAL INFORMATION

Description

U-87 MG-RFP□胞是人类胶质母□胞瘤星形□胞瘤□胞系U-87 MG的一种荧光标记变体，该□胞系最初源自一名成年患者的恶性胶质瘤。 母系 U-87 MG □胞系因其生长特性表征明确、具有成瘤潜力且与高级别星形□胞瘤相关，被广泛用作胶质母□胞瘤的体外模型。 这些□胞表现出黏附性生长，具有上皮样形态，通常用于研究□胞增殖、侵袭、血管生成以及对缺氧条件的反应等过程。

在 U-87 MG-RFP □胞中，红色荧光蛋白（RFP）的稳定表达使得在体外和体内系统中均可实时观察肿瘤□胞的行为。这种改造促进了活□胞成像、原位异种移植模型中的肿瘤追踪以及脑组织内侵袭性生长模式分析等应用。 U-87 MG-RFP□胞对于研究胶质母□胞瘤的进展、肿瘤与微环境的相互作用，以及利用荧光成像方法评估治疗策略具有特别重要的价值。

基因修饰：通过复制缺陷型慢病毒转导进行稳定修饰，以表达红色荧光蛋白（ RFP）报告基因；在嘌呤霉素筛选（1–5 µg/mL）条件下维持为多克隆□胞群。S1/BSL-1 生物安全等级。

Tissue	大脑
Disease	胶质母□胞瘤
Metastatic site	原发肿瘤部位（脑）

Applications

胶质母□胞瘤研究；基于RFP的活□胞和体内荧光成像；原位异种移植瘤追踪；肿瘤 -微环境相互作用研究；血管生成；侵袭与迁移实验；用于药物评价的嘌呤霉素筛选稳定报告基因 □胞

Synonyms

- U-87MG
- U87 MG
- U-87-MG
- U87-MG
- U-87 MG
- U-87
- U87
- 87 MG
- 87MG

CLASSIFICATION

Organism	Human
Sex	Male
Growth properties	Adherent
GMO status	GMO-S1

GMO status details

GMO-S1: This cell line contains a stably integrated red fluorescent protein (RFP) reporter introduced via replication-incompetent lentiviral transduction. The resulting polyclonal cell population was maintained under puromycin selection (1–5 µg/mL). S1 containment is required. This classification applies only within Germany and may differ elsewhere.

Biosafety level	1

CHARACTERISTICS

Morphology	上皮样

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Banking information
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Cell type	□□□□□□□□□□□□
Tumourigenic	□□□□□□□□ 107 □□□
Doubling time	□24□36□□

IDENTIFIERS

Citation

U87MG-RFP□Cytion □□□□ 305702□

NCBI TaxID	9606
Cellosaurus	Not assigned (U87MG-RFP is a lentiviral RFP derivative; parental U-87 MG CVCL_0022)

EXPRESSION AND SUSCEPTIBILITY

Antigen expression

RFP□□□□□□□□□

Isoenzymes

Me-2□1□PGM3□1□PGM1□2□ES-D□1□AK-1□1□GLO-1□1□G6PD□B

HANDLING AND CULTURE

Culture medium

EMEM□MEM Eagle□□w□2 mM L-□□□□□w□2.2 g/L NaHCO3□w□EBSS□Cytion □□□□ 820100a□□

Incubation atmosphere	37°C, 5%CO2, □□□□□

Supplements

□□□□□□□ 10% FBS

Dissociation reagent	Accutase
Split ratio	1 □ 3
Seeding density	1.5 □ 2 × 10^4 □□□/cm^2
Fluid renewal	□□ 2 □ 3 □

Thawing and culturing

Confirm that the vial remains deeply frozen upon delivery, as cells are shipped on dry ice to maintain optimal temperatures during transit.
Upon receipt, either store the cryovial immediately at temperatures below -150°C to ensure the preservation of cellular integrity, or proceed to step 3 if immediate culturing is required.
For immediate culturing, swiftly thaw the vial by immersing it in a 37°C water bath with clean water and an antimicrobial agent, agitating gently for 40-60 seconds until a small ice clump remains.
Perform all subsequent steps under sterile conditions in a flow hood, disinfecting the cryovial with 70% ethanol before opening.
Carefully open the disinfected vial and transfer the cell suspension into a 15 ml centrifuge tube containing 8 ml of room-temperature culture medium, mixing gently.
Centrifuge the mixture at 200 x g for 5 minutes, carefully discard the supernatant containing freezing medium.
Follow the procedure described under Post-Thaw Recovery

QUALITY CONTROL AND CRYOPRESERVATION

Freeze medium	□□□□□□□□□□□□□□□□□□□□□□□□+10% DMSO□□□□□□□□□□□□□□□

Storage conditions

□□□□□□□□□□□□□□□□□□□□□□□□□□ -150 □ -196 °C□□-80 °C□□□□□□□□□□□□□□□□□□□

Shipping conditions

冷冻保存的□胞系用干冰装运，并用经过验证的隔热包装和足够的制冷剂在整个运输过程中保持约 -78 °C 的温度。收到货后，应立即检查容器，并立即将小瓶转移到适当的储藏室。

DONOR

Donor age	44 年
Ethnicity	高加索人

LEGAL AND SAFETY

Safety precautions

计划将低温样品储存在液氮中以便将来解冻时，必须遵守严格的安全措施。在将冷冻样本移入或移出液氮罐时，必须穿戴适当的防护手套和防护服，并使用面罩或安全护目镜。这样做是为了降低在移出时因冷冻样品爆炸而造成伤害的风险，因为爆炸可能导致锋利的碎片飞溅。

Warranty

在Cytion，我们保证产品的质量和活力。
我们保证，从我们的工厂发货后 60 天内，我们的□胞在开始培养时都是存活的。
我们保证所有材料均符合分析证书和/或产品说明书中描述的规格。
有关详□信息，请参阅我们的 <a href="" /Who-we-are/Warranty/"" hreflang=""x-default"">保修声明。

Material Transfer Agreement required	Yes

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