

MB49-luc Cell Line

Catalogue number: 161579

Sub-type:

Images:

Contributor

Inventor: Jeffrey Schlom, PhD

Institute: National Cancer Institute

Images:

Tool details

***FOR RESEARCH USE ONLY**

Name: MB49-luc Cell Line

Alternate name: MB49-luciferase, MB49-luc, MB-49-Luc, MB49luc, MB-49-luc, MB49-LUC, MB49 Luciferase (firefly) Cells

Class:

Conjugate:

Description: MB49-luc is an aggressive, bioluminescent orthotopic bladder cancer model stably expressing luciferase, derived from the well-established MB49 cell line. The bioluminescence can be detected by in vivo imaging and offers a readout for tumour take, growth and reduction. Similarly to its parental cell line MB49 (Cat. #: 153368), it forms tumours when injected subcutaneously or orthotopically into mouse bladders. Specifically, the orthotopic intravesical bladder tumour model based on MB49-luc offers a system to study immune-related factors involved in non-muscle invasive, non-metastatic bladder tumour growth, including anti-tumour effects of treatments such as immune checkpoint inhibitors. It also provides a bladder cancer model to study mechanisms of immunotherapy non-responders, to help identifying effective immune-based combination therapies and PD-L1 function within a tumour microenvironment devoid of T cells.

Purpose:

Parental cell: MB49 Cell Line

Organism: Mouse

Tissue: Bladder

Model: Tumourigenic line

Gender: Male

Isotype:

Reactivity:

Selectivity:

Host:

Immunogen:

Immunogen UNIPROT ID:

Sequence:

Growth properties: Adherent

Production details: Parental MB49 cells transfected with a pSELECT-zeo-LucSh plasmid using Lipofectamine (InvivoGen) for luciferase expression detected by in vivo imaging

Formulation:

Recommended controls:

Bacterial resistance:

Selectable markers:

Additional notes:

Target details

Target: PD-1, the programmed death-1 receptor

Target alternate names:

Target background: The programmed death-1 (PD-1) receptor is a checkpoint inhibitor, that interacts with distinct ligands, PD-L1 (B7-H1, CD274). PD-L1 is expressed on a wide variety of human and mouse tumour cells and some immune cell populations

Molecular weight:

Ic50:

Applications

Application: In vitro and in vivo model of bladder cancer; In vivo tumour imaging

Application notes: Identification host antitumor immune mechanisms and evaluation combinations of immune-based therapies for carcinoma in situ and non-muscle invasive, non-metastatic urothelial carcinoma

Handling

Format:

Concentration:

Passage number:

Growth medium: Dulbecco's Modified Eagle Medium (DMEM) with 10% heat-inactivated foetal bovine serum supplemented with 1 mM nonessential amino acids, 1 mM sodium pyruvate, 2 mM glutamine, and penicillin/streptomycin (100 U/mL).

Temperature: 37° C

Atmosphere: 5% CO2

Volume:

Storage medium:

Storage buffer:

Storage conditions: Liquid Nitrogen

Shipping conditions: Dry Ice

Related tools

Related tools: MB49 Cell Line

References

References: Ezrova et al. Oncogene. 2021 Apr, 40(14):2539-2552. PMID: 33686241

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