MDA-MB-231 TetOn-3G MRCKBeta cell line

Catalogue number: 154149
Sub-type: Continuous
Images:

Contributor

Inventor: Daniel Croft ; Justin Bower ; Heather Mckinnon
Institute: Cancer Research UK, Glasgow: The Beatson Institute
Images:

Tool details

***FOR RESEARCH USE ONLY**

Name: MDA-MB-231 TetOn-3G MRCKBeta cell line

Alternate name: Serine/threonine-protein kinase MRCK beta, CDC42-binding protein kinase beta, CDC42BP-beta, DMPK-like beta, Myotonic dystrophy kinase-related CDC42-binding kinase beta, MRCK beta, Myotonic dystrophy protein kinase-like beta

Class:
Conjugate:
Description: This cell line has been engineered to enable tetracycline inducible expression of the kinase MRCK?. MRCK? is a myotonic dystrophy kinase-related CDC42-binding kinase involved in regulating actin-myosin contractility and implicated in cancer metastasis. MRCK?, in conjunction with MRCKa, ROCK1 and ROCK2 kinases, initiates signalling events that lead to contractile force generation which powers cancer cell motility and invasion. The cell line is a derivative of a human breast cancer cell line shown to reliably metastasize to clinically relevant sites (the lungs and lymph nodes) when implanted orthotopically in mice (i.e. when implanted in the breast pad of mice). The cell line expresses luciferase enabling detection of the location of the cells using bioluminescent imaging. Useful for the study of breast cancer cell cytoskeleton reorganisation and cell migration. This cell line is derived from a triple negative breast cancer (TNBC) meaning it does not express oestrogen, progesterone or HER2 receptors. Treatment with doxycycline induced MRCKÄ?Â???Â? kinase domain expression and resulted in increased MLC phosphorylation. Clone demonstrated profound membrane blebbing following doxycycline treatment. Transgene expression did not appear to be 'leaky' in any clones tested.
Purpose:
Parental cell: MDA-MB-231 D3H2LN-Luc cell line
Organism: Human
Tissue: Breast
Model: Transgenic
Gender:

Isotype:
Reactivity:
Selectivity:
Host:
Immunogen:
Immunogen UNIPROT ID:
Sequence:
Growth properties: Adherent cell line. Membrane blebbing/cytoskeleton reorganisation and migration induced in the presence of doxycycline.
Production details:
Formulation:
Recommended controls: MDA-MB-231 D3H2LN-Luc parental line
Bacterial resistance:
Selectable markers:
Additional notes: Treatment with doxycycline induced MRCK? kinase domain expression and resulted in increased MLC phosphorylation. Clone demonstrated profound membrane blebbing following doxycycline treatment. Transgene expression did not appear to be 'leaky' in any clones tested. Tet-On System owned by TET Systems GmbH & Co. KG.

Target details

Target: MRCKÄ?Â???Â?

Target alternate names:

Target background:

Molecular weight:

Ic50:

Applications

Application:
Application notes:

Handling

Format: Frozen
Concentration:
Passage number:
Growth medium: 10% FBS/MEM-EBSS/NEAA/NaPyr/Glutamine
Temperature:
Atmosphere:
Volume:

Storage medium:
Storage buffer:
Storage conditions: Liquid Nitrogen
Shipping conditions: Dry ice

Related tools

Related tools:

References

References: