

# MDA-MB-231 TetOn-3G ROCK1 cell line

**Catalogue number:** 154150

**Sub-type:** Continuous

**Images:**

## Contributor

**Inventor:** Heather Mckinnon ; Justin Bower ; Daniel Croft

**Institute:** Cancer Research UK, Glasgow: The Beatson Institute

**Images:**

## Tool details

**\*FOR RESEARCH USE ONLY**

**Name:** MDA-MB-231 TetOn-3G ROCK1 cell line

**Alternate name:** Rho-associated protein kinase 1, Renal carcinoma antigen NY-REN-35, Rho-associated, coiled-coil-containing protein kinase 1, Rho-associated, coiled-coil-containing protein kinase I, ROCK-I, p16 ROCK-1, p16ROCK

**Class:**

**Conjugate:**

**Description:** This cell line has been engineered to enable tetracycline inducible expression of the kinase ROCK1. ROCK1 is a serine/threonine kinase which acts as a key regulator of the actin-myosin cytoskeleton and cell polarity. ROCK1 promotes contractile force generation and therefore is a modulator of cell motility and tumour cell 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.

**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:** Tet-On System owned by TET Systems GmbH & Co. KG.

## Target details

**Target:** ROCK1

**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:** Unbekandt et al. 2014. Cell Commun Signal. 12:54. PMID: 25288205. ; A novel small-molecule MRCK inhibitor blocks cancer cell invasion.

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