abcam

Product datasheet

Human KRT19 knockout MCF7 cell line ab270482

10 Images

Overview

Product name	Human KRT19 knockout MCF7 cell line
Parental Cell Line	MCF7
Organism	Human
Mutation description	Knockout achieved by CRISPR/Cas9; X = 10 bp deletion, 20 bp deletion; Frameshift: 99.83%
Passage number	<20
Knockout validation	Immunocytochemistry (ICC), Next Generation Sequencing (NGS)
Tested applications	**Suitable for:** ICC
Biosafety level	1
General notes	**Recommended control:** Human wild-type MCF7 cell line (ab271144). Please note a wild-type cell line is not automatically included with a knockout cell line order, if required please add recommended wild-type cell line at no additional cost using the code WILDTYPE-TMTK1. **Cryopreservation cell medium:** Cell Freezing Medium-DMSO Serum free media, contains 8.7% DMSO in MEM supplemented with methyl cellulose. **Culture medium:** MEM + 10% FBS + 0.01 mg/ml bovine insulin **Initial handling guidelines:** Upon arrival, the vial should be stored in liquid nitrogen vapor phase and not at -80°C. Storage at -80°C may result in loss of viability. 1. Thaw the vial in 37°C water bath for approximately 1-2 minutes. 2. Transfer the cell suspension (0.8 mL) to a 15 mL/50 mL conical sterile polypropylene centrifuge tube containing 8.4 mL pre-warmed culture medium, wash vial with an additional 0.8 mL culture medium (total volume 10 mL) to collect remaining cells, and centrifuge at 201 x g (rcf) for 5 minutes at room temperature. 10 mL represents minimum recommended dilution. 20 mL represents maximum recommended dilution. 3. Resuspend the cell pellet in 5 mL pre-warmed culture medium and count using a haemocytometer or alternative cell counting method. Based on cell count, seed cells in an appropriate cell culture flask at a density of 5-7x10^4 cells/cm^2. Seeding density is given as a guide only and should be scaled to align with individual lab schedules. 4. Incubate the culture at 37°C incubator with 5% CO_2. Cultures should be monitored daily. **Subculture guidelines:** All seeding densities should be based on cell counts gained by established methods. A guide seeding density of 5-7x10^4 cells/cm^2 is recommended. A partial media change 24 hours prior to subculture may be helpful to encourage growth, if required.

Cells should be passaged when they have achieved 80-90% confluence.
This product is subject to limited use licenses from The Broad Institute and ERS Genomics Limited, and is developed with patented technology. For full details of the limited use licenses and relevant patents please refer to our limited use license and patent pages.

Properties

Number of cells	1 x 10^6 cells/vial, 1 mL
Viability	~80%
Adherent /Suspension	Adherent
Tissue	Breast
Cell type	epithelial
Disease	Adenocarcinoma
Gender	Female
Mycoplasma free	Yes
Storage instructions	Shipped on Dry Ice. Store in liquid nitrogen.
Storage buffer	Constituents: 8.7% Dimethylsulfoxide, 2% Cellulose, methyl ether
Purity	Immunogen affinity purified

Target

Function	Involved in the organization of myofibers. Together with KRT8, helps to link the contractile apparatus to dystrophin at the costameres of striated muscle.
Tissue specificity	Expressed in a defined zone of basal keratinocytes in the deep outer root sheath of hair follicles. Also observed in sweat gland and mammary gland ductal and secretory cells, bile ducts, gastrointestinal tract, bladder urothelium, oral epithelia, esophagus, ectocervical epithelium (at protein level). Expressed in epidermal basal cells, in nipple epidermis and a defined region of the hair follicle. Also seen in a subset of vascular wall cells in both the veins and artery of human umbilical cord, and in umbilical cord vascular smooth muscle. Observed in muscle fibers accumulating in the costameres of myoplasm at the sarcolemma in structures that contain dystrophin and spectrin.
Sequence similarities	Belongs to the intermediate filament family.
Developmental stage	Present in hair follicles at all stages of development.
Domain	This keratin differs from all other IF proteins in lacking the C-terminal tail domain.

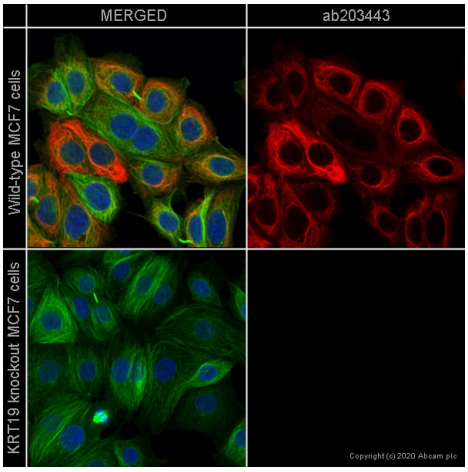
Applications

The Abpromise guarantee Our Abpromise guarantee covers the use of ab270482 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

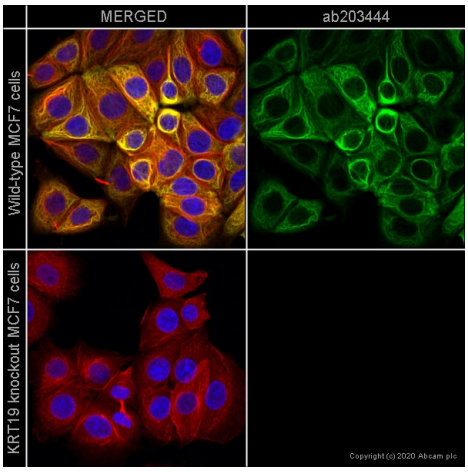
Application	Abreviews	Notes
ICC		Use at an assay dependent concentration.

Images



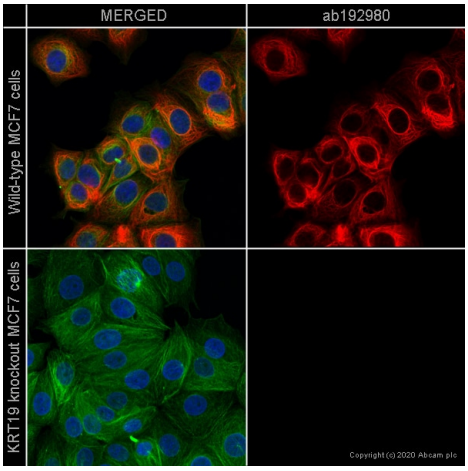
Immunocytochemistry - Human KRT19 knockout MCF7 cell line (ab270482)

ab203443 staining Cytokeratin 19 in wild-type MCF7 cells (top panel) and KRT19 knockout MCF7 cells (ab270482) (bottom panel). The cells were fixed with 4% paraformaldehyde (10 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with ab203443 at 1/500 dilution (shown in red) and ab195887 (Mouse monoclonal to alpha Tubulin - Alexa Fluor® 488) at 1/250 dilution (shown in green) overnight at +4°C. Nuclear DNA was labelled in blue with DAPI. Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).



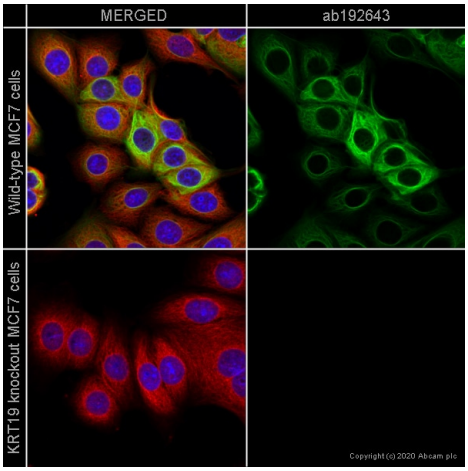
Immunocytochemistry - Human KRT19 knockout MCF7 cell line (ab270482)

ab203444 staining Cytokeratin 19 in wild-type MCF7 cells (top panel) and KRT19 knockout MCF7 cells (ab270482) (bottom panel). The cells were fixed with 4% paraformaldehyde (10 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with ab203444 at 1/500 dilution (shown in green) and ab195884 (Rat monoclonal to Tubulin - Alexa Fluor® 647) at 1/100 dilution (shown in red) overnight at +4°C. Nuclear DNA was labelled in blue with DAPI. Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).



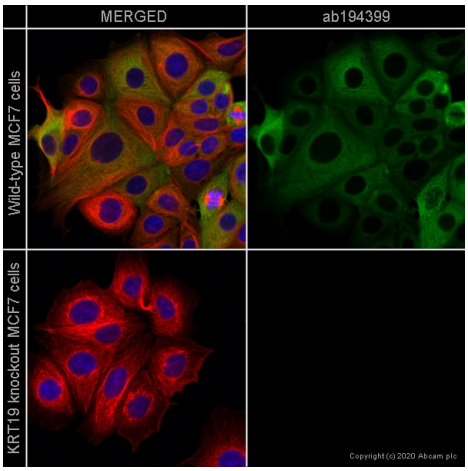
Immunocytochemistry - Human KRT19 knockout MCF7 cell line (ab270482)

ab192980 staining Cytokeratin 19 in wild-type MCF7 cells (top panel) and KRT19 knockout MCF7 cells (ab270482) (bottom panel). The cells were fixed with 4% paraformaldehyde (10 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with ab192980 at 1/100 dilution (shown in red) and ab195887 (Mouse monoclonal to alpha Tubulin - Alexa Fluor® 488) at 1/250 dilution (shown in green) overnight at +4°C. Nuclear DNA was labelled in blue with DAPI. Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).



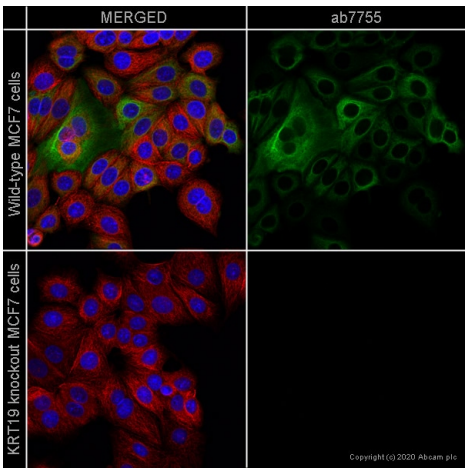
Immunocytochemistry - Human KRT19 knockout MCF7 cell line (ab270482)

ab192643 staining Cytokeratin 19 in wild-type MCF7 cells (top panel) and KRT19 knockout MCF7 cells (ab270482) (bottom panel). The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with ab192643 at 1/500 dilution (shown in green) and ab195884 (Rat monoclonal to Tubulin - Alexa Fluor® 647) at 1/100 dilution (shown in red) overnight at +4°C. Nuclear DNA was labelled in blue with DAPI. Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).



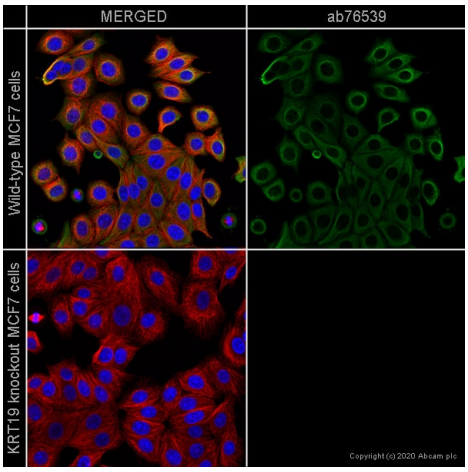
Immunocytochemistry - Human KRT19 knockout MCF7 cell line (ab270482)

ab194399 staining Cytokeratin 19 in wild-type MCF7 cells (top panel) and KRT19 knockout MCF7 cells (ab270482) (bottom panel). The cells were fixed with 4% paraformaldehyde (10 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with ab194399 at 1µg/ml concentration and ab6046 (Rabbit polyclonal to beta Tubulin) at 1/1000 dilution overnight at +4°C, followed by a further incubation at room temperature for 1h with a goat secondary antibody to mouse IgG (Alexa Fluor® 488) (ab150117) at 2 µg/ml (shown in green) and a goat secondary antibody to rabbit IgG (Alexa Fluor® 594) (ab150080) at 2 µg/ml (shown in red). Nuclear DNA was labelled in blue with DAPI.
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).



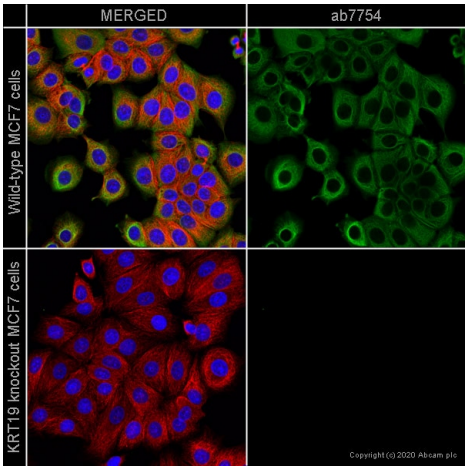
Immunocytochemistry - Human KRT19 knockout MCF7 cell line (ab270482)

ab7755 staining Cytokeratin 19 in wild-type MCF7 cells (top panel) and KRT19 knockout MCF7 cells (ab270482) (bottom panel). The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with ab7755 at 5µg/ml concentration and ab6046 (Rabbit polyclonal to beta Tubulin) at 1/1000 dilution overnight at +4°C, followed by a further incubation at room temperature for 1h with a goat secondary antibody to mouse IgG (Alexa Fluor® 488) (ab150117) at 2 µg/ml (shown in green) and a goat secondary antibody to rabbit IgG (Alexa Fluor® 594) (ab150080) at 2 µg/ml (shown in red). Nuclear DNA was labelled in blue with DAPI.
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).



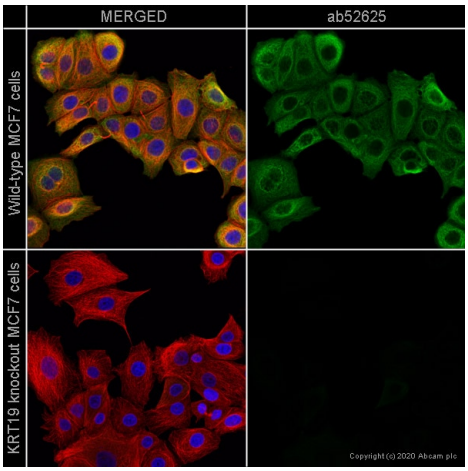
Immunocytochemistry - Human KRT19 knockout MCF7 cell line (ab270482)

ab76539 staining Cytokeratin 19 in wild-type MCF7 cells (top panel) and KRT19 knockout MCF7 cells (ab270482) (bottom panel). The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with ab76539 at 1/500 dilution and ab7291 (Mouse monoclonal to alpha Tubulin) at 1/1000 dilution overnight at +4°C, followed by a further incubation at room temperature for 1h with a goat secondary antibody to rabbit IgG (Alexa Fluor® 488) (ab150081) at 2 µg/ml (shown in green) and a goat secondary antibody to mouse IgG (Alexa Fluor® 594) (ab150120) at 2 µg/ml (shown in red). Nuclear DNA was labelled in blue with DAPI.
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).



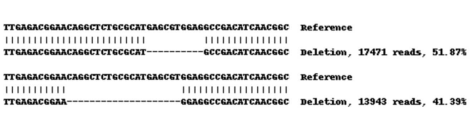
Immunocytochemistry - Human KRT19 knockout MCF7 cell line (ab270482)

ab7754 staining Cytokeratin 19 in wild-type MCF7 cells (top panel) and KRT19 knockout MCF7 cells (ab270482) (bottom panel). The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with ab7754 at 1/500 dilution and ab6046 (Rabbit polyclonal to beta Tubulin) at 1/1000 dilution overnight at +4°C, followed by a further incubation at room temperature for 1h with a goat secondary antibody to mouse IgG (Alexa Fluor® 488) (ab150117) at 2 µg/ml (shown in green) and a goat secondary antibody to rabbit IgG (Alexa Fluor® 594) (ab150080) at 2 µg/ml (shown in red). Nuclear DNA was labelled in blue with DAPI.
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).



Immunocytochemistry - Human KRT19 knockout MCF7 cell line (ab270482)

ab52625 staining Cytokeratin 19 in wild-type MCF7 cells (top panel) and KRT19 knockout MCF7 cells (ab270482) (bottom panel). The cells were fixed with 4% paraformaldehyde (10 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with ab52625 at 1/100 dilution and ab7291 (Mouse monoclonal to alpha Tubulin) at 1/1000 dilution overnight at +4°C, followed by a further incubation at room temperature for 1h with a goat secondary antibody to rabbit IgG (Alexa Fluor® 488) (ab150081) at 2 µg/ml (shown in green) and a goat secondary antibody to mouse IgG (Alexa Fluor® 594) (ab150120) at 2 µg/ml (shown in red). Nuclear DNA was labelled in blue with DAPI.
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).



Next Generation Sequencing - Human KRT19 knockout MCF7 cell line (ab270482)

Knockout achieved by CRISPR/Cas9; X = 10 bp deletion, 20 bp deletion; Frameshift: 99.83%

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