Product sheet

HK EB3-EGFP Cells | 300668

General information

Description	These stable clonal cells were meticulously created through a series of steps, starting with the transfection of a circular plasmid and then selecting drug-resistant cells. Derived from human organisms, specifically the cervix tissue, these cells are associated with the disease known as carcinoma. Also referred to as HeLa Kyoto EGFP-EB3, these cells belong to the HeLa Kyoto lineage, originating from human cervix carcinoma cells. When cultured, they exhibit monolayer adherent growth properties, forming a layer of epithelial-like cells with a distinctive mosaic stone shape. This morphology enhances their visual appeal and ease of observation. As with their human origin, the HeLa Kyoto EB3-EGFP cells carry specific markers known as EB3-EGFP, enabling their unique applications. One significant application of these cells is their exceptional suitability for visualizing individual microtubules, the dynamic structures essential for cellular processes. By utilizing these cells, researchers can delve into the intricacies of microtubule dynamics and perform accurate quantification. Furthermore, it is worth noting that the HeLa Kyoto EB3-EGFP cells are associated with a specific disease called human papillomavirus-related endocervical adenocarcinoma. This link provides researchers with a valuable tool for studying and understanding this disease's cellular behaviour and characteristics. The HeLa Kyoto EB3-EGFP cells are derived from a female donor who was sampled at the age of 30 years and six months. Classified as a cancer cell line, these cells offer a valuable resource for various research endeavours, particularly in biological science. With its diverse applications and unique characteristics, the HeLa Kyoto EB3-EGFP cells are an indispensable tool for researchers seeking to explore the intricacies of microtubule dynamics and investigate human papillomavirus-related endocervical adenocarcinoma. Unlock the potential of these cells and advance your research in the captivating world of biological science.
Organism	Human
Tissue	Cervix
Disease	Carcinoma
Synonyms	HeLa Kyoto EB3-EGFP, HeLa Kyoto EB3 EGFP, HeLa Kyoto EGFP-EB3

Characteristics

Age	30 years
Gender	Female
Ethnicity	African American
Morphology	Epithelial-like cells with mosaic stone shape
Growth properties	Monolayer, adherent

Identifiers / Biosafety / Citation

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Citation	HK EB3-EGFP (Cytion catalog number 300668)
Biosafety level	1
Depositor	Dr. J. Ellenberg, EMBL Heidelberg

Expression / Mutation

Protein expression	mEGFP (microtubule End-binding protein 3 mEGFP tagged): Location/Gene: 1..589 / Pcmv, 652..1497 / EB3, 1516..2235 / EGFP, 3466..4260 / KanR/NeoR
Products	CMV Promotor EB3, Neomycin, Phosphotransferase

Handling

Culture Medium	DMEM, w: 4.5 g/L Glucose, w: 4 mM L-Glutamine, w: 1.5 g/L NaHCO3, w: 1.0 mM Sodium pyruvate (Cytion article number 820300a)
Medium supplements	Supplement the medium with 10% FBS
Passaging solution	Accutase
Subculturing	Remove medium and rinse the adherent cells using PBS without calcium and magnesium (3-5 ml PBS for T25, 5-10ml for T75 cell culture flasks). Add Accutase (1-2ml per T25, 2.5ml per T75 cell culture flask), the cell sheet must be covered completely. Incubate at ambient temperature for 8-10 minutes. Carefully resuspend the cells with medium (10 ml), centrifuge for 3 min at 300xg, resuspend cells in fresh medium and dispense into new flasks which contain fresh medium.
Split ratio	A ratio of 1:3 is recommended
Seeding density	1 x 10^4 cells/cm^2
Fluid renewal	2 to 3 times per week
Freezing recovery	After thawing, plate the cells at 5 x 10^4 cells/cm^2 and allow the cells to recover from the freezing process and to adhere for at least 24 hours.
Freeze medium	CM-1 (Cytion catalog number 800100) or CM-ACF (Cytion catalog number 806100)

Handling of cryopreserved cultures	HK EB3-EGFP cells are shipped in a deep-frozen state on dry ice. Upon receipt, confirm that the vial remains frozen. For storage, place the cryovial immediately at temperatures below -150 degrees. If you plan to culture the cells immediately, swiftly thaw the vial by shaking it in a 37 degrees water bath with clean water and an antimicrobial agent for 40-60 seconds. Remove the vial once a small ice clump persists, ensuring it remains cold. Proceed with all subsequent steps under aseptic conditions. In a sterile flow hood, disinfect the cryovial with 70% ethanol. Then, gently open the vial and transfer the cell suspension into a 15 ml centrifuge tube pre-filled with 8 ml of room temperature culture medium. Gently mix the cells. For cell separation, centrifuge at 300 x g for 3 minutes and dispose of the supernatant. Skipping centrifugation is optional, although any residual freezing medium should be removed after 24 hours. Resuspend the pellet gently in 10 ml of fresh culture medium and divide between two T25 culture flasks. Follow the subculture protocol for subsequent steps.
Handling of proliferating cultures	One or two cell culture flasks come filled with cell culture medium. Collect the entire medium in a 50 ml centrifuge tube. Spin down the collected medium at 300 x g for 3 minutes to collect the cells which may have detached during transit. If a cell pellet is visible, resuspend the cells in 5 ml of cell culture medium and transfer to a T25 cell culture flask. Carefully add 5 ml of cell culture medium to each T25 cell culture flask. Examine cell morphology and confluency using a microscope. Finally, incubate the flasks at 37 degrees Celsius for at least 24 hours.

Quality control / Genetic profile / HLA

Sterility	Mycoplasma contamination is rigorously excluded using both PCR-based assays and luminescence-based mycoplasma detection methods. To ensure there is no bacterial, fungal, or yeast contamination, cell cultures are subjected to daily visual inspections.