



ExpressCells

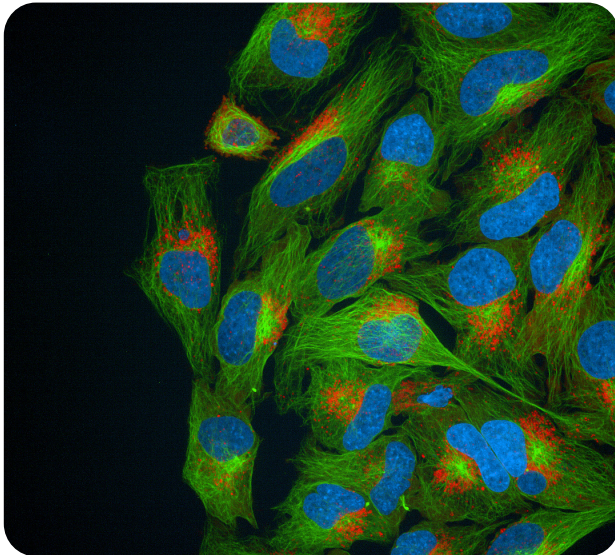
SEQUESTOSOME-1/p62

BETA-TUBULIN

HISTONE H1.2

Triple gene-tagged cell line (HeLa)

Catalog no: EXP-008



Product summary

This triple-labeled cell line can be used for identifying autophagic vesicles after stimulation with inducers or inhibitors of autophagy in live cells. This triple-labeled cell line allows detection of a) the autophagy receptor protein p62 (Sequestosome-1), b) the microtubules (β -Tubulin), and c) the cell nucleus (Histone H1.2).

Cell type:	HeLa
Gene symbol / NCBI gene ID:	a) SQSTM1 / 8878 b) TUBB / 203068 c) HIST1H1C / 3006
Proteins:	a) Sequestosome-1/p62 b) β -Tubulin c) Histone H1.2
Subcellular location / function:	a) Autophagy receptor b) Cytoskeleton c) Nucleus
Modification:	a) C-terminal mRuby3 b) C-terminal mClover3 c) C-terminal mtagBFP2
Excitation / Emission (nm):	a) 558 / 592 b) 506 / 518 c) 399 / 454
Antibiotic resistance:	a) Zeocin TM b) Puromycin c) Blastidicin
Population type:	Heterozygous

Gene / protein summaries from NCBI database

a) This gene encodes a multifunctional protein that binds ubiquitin and regulates activation of the nuclear factor kappa-B (NF- κ B) signaling

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CUSTOM CELL LINE SERVICES AVAILABLE UP TO 3 KNOCK-INS IN A SINGLE CELL LINE

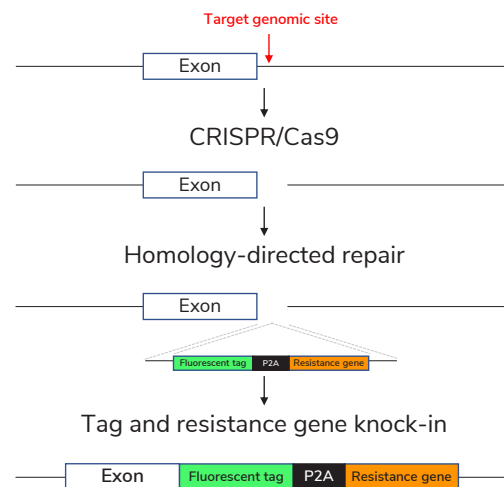
pathway. The protein functions as a scaffolding/adaptor protein in concert with TNF receptor-associated factor 6 to mediate activation of NF- κ B in response to upstream signals... [provided by RefSeq, Mar 2009]

b) This protein forms a dimer with alpha tubulin and acts as a structural component of microtubules.... [provided by RefSeq, Jun 2014]

c) Histones are basic nuclear proteins responsible for nucleosome structure of the chromosomal fiber in eukaryotes. Two molecules of each of the four core histones (H2A, H2B, H3, and H4) form an octamer, around which approximately 146 bp of DNA is wrapped in repeating units, called nucleosomes. The linker histone, H1, interacts with linker DNA between nucleosomes and functions in the compaction of chromatin into higher order structures. This gene is intronless and encodes a replication-dependent histone that is a member of the histone H1 family. Transcripts from this gene lack polyA tails but instead contain a palindromic termination element. This gene is found in the large histone gene cluster on chromosome 6. [provided by RefSeq, Aug 2015]

ExpressCells' FAST-HDR knock-in technology

ExpressCells uses CRISPR and FAST-HDR vector technology to knock-in fluorescent, luminescent, or other tags at the C-terminus of endogenous genes. The non-viral FAST-HDR system enables rapid labeling of up to three proteins of interest in a single mammalian cell line.



Handling

Culture medium: Dulbecco's Modified Eagle Medium (DMEM), high glucose supplemented with 10% fetal bovine serum (FBS) and penicillin/streptomycin to prevent bacterial contamination.

Thawing: Transfer the frozen tube to a 37° C water bath and let contents thaw. Transfer tube contents to 10 mL of prewarmed medium in a biosafety hood and centrifuge at 200 × g for 5 min. Resuspend the pellet in 5 mL of medium and transfer to a mammalian cell culture flask.

Safety: Biosafety level 2.

References

- Gene [database online]. Washington DC: NCBI; 2020. <https://www.ncbi.nlm.nih.gov/gene/8878>. Accessed March 19, 2020.
- Gene [database online]. Washington DC: NCBI; 2020. <https://www.ncbi.nlm.nih.gov/gene/203068>. Accessed March 19, 2020.
- Gene [database online]. Washington DC: NCBI; 2020. <https://www.ncbi.nlm.nih.gov/gene/3006>. Accessed March 19, 2020.
- Perez-Leal O, Nixon-Abell J, Barrero CA, Gordon J, Rico MC. A versatile vector system for the fast generation of knock-in cell lines with CRISPR [preprint published online February 6 2020]. *bioRxiv*. doi: 10.1101/2020.02.06.927384.

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