Product Sheet

abberior CELL LINE – Mito-SNAP / ER-Halo

Version	1.0
Date	2025-08-15

1. Identification

1.1 Product Identifier

Trade name: abberior CELL LINE – Mito-SNAP / ER-Halo
(article number: CELLS-0001-1VIAL)

1.2 Details of the Supplier

Manufacturer / Distributor

Abberior GmbH

Street / PO Box

Hans-Adolf-Krebs-Weg 6

Country Code / Postal Code / City

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2. General Information

2.1 Description

The abberior CELL LINE – Mito-SNAP / ER-Halo is a genetically modified osteosarcoma cell line derived from the human U2OS parental cell line. It has been engineered to incorporate a SNAP-Tag with a targeting sequence for the outer mitochondrial membrane and a Halo-Tag with an ER-targeting sequence in the AAVS1 locus, enabling two-color visualization of both organelles in living cells. The integration of a SNAP- and Halo-Tag makes this cell line a valuable tool for testing new fluorescent substrates, optimizing live cell imaging, benchmark imaging systems, and supporting various research applications. Since the abberior CELL LINE – Mito-SNAP / ER-Halo retains the characteristics of the parental U2OS cell line, including high genetic stability and ease of culture, the SNAP-Halo-Tag system allows users to selectively and rapidly label mitochondria and ER. This cell line has been vigorously tested and is highly compatible with the abberior LIVE probes (SNAP-, Halo-, HaloX-ligands) and direct labels (actin, tubulin, DNA, Mito, membrane), making it well-suited for precise and efficient staining in live-cell imaging

applications. As a result, this cell line provides a robust platform for real-time organelle imaging in both normal and disease-related conditions, thereby contributing significantly to the fields of fundamental research and applied biomedical studies. Please refer to our product sheet for detailed instructions on the characteristics, handling, and storage.

2.2 Organism

Homo sapiens, human

2.3 Tissue

Bone

2.4 Disease

Osteosarcoma

2.5 Morphology

Epithelial

2.6 Product format

Frozen

2.7 Storage conditions

Liquid nitrogen

2.8 Biosafety level

1

2.9 Protein expression

Mito-SNAP (Outer membrane protein 25 (OMP25), SNAP-Tag)

ER-Halo (CalR + KDEL, Halo-Tag)

3. Characteristics

3.1 Age

15 years

3.2 Gender

Female

3.3 Ethnicity

Caucasian

3.4 Growth properties

Adherent

4. Handling Information

4.1 Culture Medium

McCoy's 5A Medium, supplemented with 1 mM Sodium Pyruvate and 10% FBS (optional: Pen/Strep)

4.2 Temperature

37 °C

4.3 Atmosphere

95% air, 5% CO_2

4.4 Handling of cryopreserved cultures

Upon Arrival:

Verify that the cryovial remains completely frozen.

Immediately transfer the vial from the dry ice packaging to storage at temperatures below -130 °C, ideally in the vapor phase of liquid nitrogen.

To ensure maximum cell viability, thaw and initiate the culture as soon as possible after receipt.

Thawing:

Rapidly thaw the vial by immersing it in a 37 °C water bath containing clean water and an appropriate antimicrobial agent. Gently agitate for 40–60 seconds until the contents are nearly thawed.

Disinfect the outside of the cryovial with 70% ethanol.

From this point forward, carry out all procedures under sterile conditions in a certified laminar flow hood.

Cell Recovery:

Carefully open the disinfected vial and transfer the thawed cells into a 15 mL centrifuge tube containing approx. 9 mL of complete culture medium. Mix gently and centrifuge at 300 × g for 5 minutes to pellet the cells.

Discard the supernatant and gently resuspend the cell pellet in 10 mL of fresh, pre-warmed complete medium. Evenly divide the cell suspension into one T25 culture flask.

Incubate the flasks under standard culture conditions (e.g., 37 °C, 5% CO_2 atmosphere) and follow the subculture protocols to support consistent cell growth.

4.5 Subculturing

Remove medium and rinse cells with PBS. Remove PBS, add Trypsin-EDTA solution, and incubate flasks at room temperature or 37 °C until the cells detach. Add fresh culture medium and carefully resuspend the cells. Split cells into new culture flasks containing fresh medium.

4.6 Split ratio

1:4 to 1:6

4.7 Seeding density

1 x 10^4 cells /cm^2

4.8 Medium renewal

2-3 times per week

4.9 Freeze medium

50% complete growth medium, without FBS

40% FBS

10% DMSO

5. Quality control

5.1 Bacterial and fungal testing

Not detected (visual detection)

5.2 Mycoplasma contamination

Not detected (PCR-based assay)

5.3 Virus contamination

Not detected: HBV, HCV, HIV-1, HIV-2 (PCR-based assay)

5.4 STR profiling

17 STR loci

x/y

6. Limited Use License Agreement

The purchaser is granted a limited, non-transferable license to use the provided cells solely for internal research purposes. The cells may not be resold, transferred, or otherwise made available to any third party, whether for commercial or non-commercial use, without prior written consent from the provider.

Any use of the cells beyond the scope of this agreement, including but not limited to clinical applications, diagnostic use, or incorporation into commercial products, is strictly prohibited.

By using the cells, the purchaser agrees to comply with the terms of this license.

7. Other Information

This product is intended for use only by persons with proper skills and at their own risk. It is the responsibility of the user to determine the product's suitability for its intended use, the product's safe use, and the product's proper disposal. The recommendations given in this data sheet are based on prudent application of professional judgment. The information is given as a guide but shall not be taken as complete. As this product may pose unknown hazards it should be used with caution. Since Abberior GmbH cannot control the conditions of use of the product, it shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. THE INFORMATION IN THIS PRODUCT SHEET DOES NOT CONSTITUTE A WARRANTY, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

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