

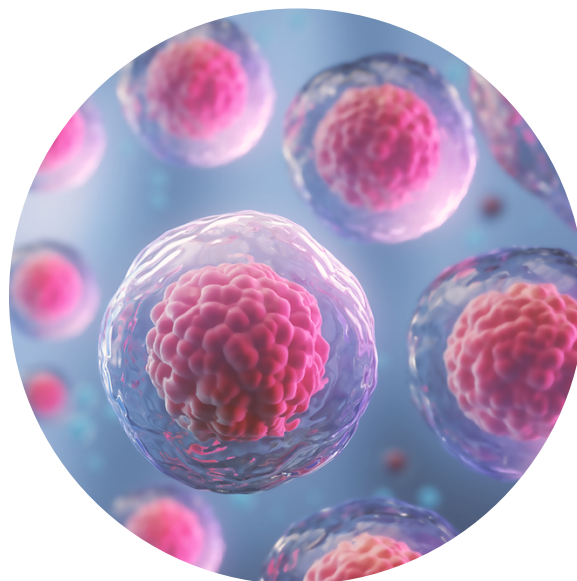
Specifications and
Instruction Quick Steps

Oil Red O Staining Kit

LL-0052

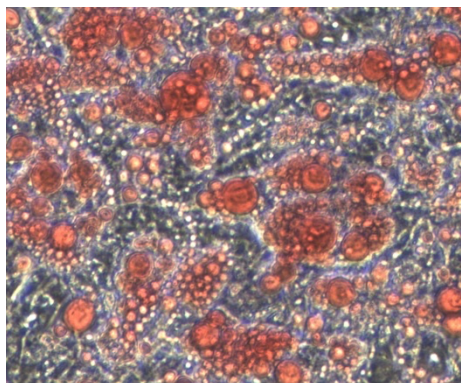


This product is for Research Use Only.
This product is not approved for human or
veterinary use or for use in in vitro
diagnostics or clinical procedures.



LIFELINE[®]
CELL TECHNOLOGY

Better Solutions for
Breakthrough Results



Lifeline's adipose-derived mesenchymal stem cells differentiated to adipocytes and stained with Oil Red O (200X).

Oil Red O Staining Kit Components

Oil Red O stains lipid vesicles which are created by functional adipocytes and is a useful tool when used with Lifeline's human mesenchymal stem cells and Lifeline's AdipoLife™ DfKt™-1 or DfKt-2 Adipogenesis Media. The Oil Red O kit contains fixative solution, dehydration solution, Oil Red O stain solution, and stain differential solution for staining lipid vesicles in adipocytes.

Safety Statement

These products are for Research Use Only and are not approved for human or veterinary use, or for use in *in vitro* diagnostics or clinical procedures. Paraformaldehyde releases formaldehyde gas, which is a known carcinogen. It is best to work with paraformaldehyde in a chemical fume hood. Please dispose of paraformaldehyde and reagents in accordance with local and federal regulations.

The Lifeline Guarantee

Lifeline's rigorous quality control ensures sterility and performance to standardized testing criteria. Upon request, Lifeline will provide lot-specific QC test results, material safety data sheets and certificates of analysis. See complete guarantee/warranty statement at lifelinecelltech.com or contact your Lifeline representative for more information.

Product	Part No.	Volume	Storage
Oil Red O Lipid Staining Kit	LL-0052		
0.5% Oil Red O Stain Solution	CM-0054	100 mL	RT
4% Paraformaldehyde Fixative Solution	CM-0055	100 mL	-20°C
100% 1,2-Propanediol Dehydration Solution	CM-0056	100 mL	RT
85% 1,2-Propanediol Stain Differential Solution	CM-0057	100 mL	RT
Other Recommended Products	Part No.	Volume	Storage
Phosphate Buffered Saline	CM-0001	500 mL	RT



Call Lifeline Technical Service and Sales at **877.845.7787**

Or visit lifelinecelltech.com for more information

Lifeline Cell Technology | 8415 Progress Drive, Suite T | Frederick, MD 21701

©2024 Lifeline Cell Technology, an International Stem Cell Company | All Rights Reserved

Additional Materials Recommended but Not Provided by Lifeline Cell Technology

- Deionized water (dH₂O)
- Coarse filter paper

**Quick Steps for Fixation Staining of Adipocytes for Lipid Vesicles
(Cultured in a 6-Well Plate Format)**

- Always wash hands before and after working with cell cultures.**
- Always wear eye protection and gloves when working with cell cultures.**
- When working with cells or medium, always use a certified biological safety cabinet.**
- Use 4% Paraformaldehyde Fixative Solution in a chemical fume hood.**
- Adipocytes may be stained with Oil Red O at either 37°C or 60°C.
- Pre-heat an oven to 60°C or a water bath to 37°C.
- For each well to be stained, pre-warm 2.5 mL of Oil Red O Solution (37°C or 60°C) in a 50 mL conical tube.
- Once Oil Red O Solution has come to temperature, filter the solution through a coarse Whatman® filter paper, or equivalent, into a fresh tube to remove small particulates.
- Return Oil Red O Solution to warming at 37°C or 60°C.
- Partially aspirate AdipoLife™ Adipogenesis Medium from each well. Never allow monolayer to be exposed to air at any point during staining. If the cells are allowed to dry the lipid vesicles will burst.
- Gently, from the side of the well, add 2 mL of Lifeline® PBS (CM-0001).
- Repeat steps 10 and 11 two more times.
- Partially aspirate PBS from the wells.
- Gently add 2 mL of 4% Paraformaldehyde Fixative Solution (CM-0055) to each well of a 6-well plate.
- Partially remove 4% Paraformaldehyde from each well, and replace with another 2 mL of 4% Paraformaldehyde.
- Fix for at least 20 minutes at room temperature.
- Partially remove Paraformaldehyde solution.
- Rinse each well twice with 2 mL of deionized water.
- Gently add 1 mL of the 100% 1,2-Propanediol Dehydration Solution (CM-0056) to each well.
- Incubate for 5 minutes at room temperature. Gently tilt the plate 2 to 3 times to mix.
- Partially remove Dehydration Solution.
- Gently add another 1 mL of 100% 1,2-Propanediol Dehydration Solution to each well.



Call Lifeline Technical Service and Sales at 877.845.7787

Or visit lifelinecelltech.com for more information

Lifeline Cell Technology | 8415 Progress Drive, Suite T | Frederick, MD 21701

©2024 Lifeline Cell Technology, an International Stem Cell Company | All Rights Reserved

23. Incubate for 5 minutes at room temperature. Gently tilt the plate 2 to 3 times to mix.
24. Partially remove Dehydration Solution.
25. Gently add 2 mL Oil Red O Stain Solution (CM-0054) to each well.
26. Incubate at 37°C for 30 minutes or at 60°C for 8 minutes. Tilt the plate 2 to 3 times during the incubation.
27. Partially remove Oil Red O Solution.
28. Gently add 2 mL of 85% 1,2-Propanediol Stain Differential Solution (CM-0057) for 1 minute to differentiate stain. **Do not tilt the plate, or agitate the Stain Differential Solution in the well(s)!**
29. Partially remove the Stain Differential Solution.
30. Rinse wells carefully twice with 2 mL deionized water per well.
31. Leave the final deionized water rinse in the well.
32. Fixation and staining is complete.

(Whatman is a registered trademark of GE Healthcare.)

For any question on cell staining; please contact technical service at 877.845.7787. We are here to help.

Other Recommended Products	Part No.	Unit	Components	Storage
Human Mesenchymal Stem Cells-Wharton's Jelly (HMSC-WJ)	FC-0020	0.5 x 10 ⁶ Cells		-150°C
Human Mesenchymal Stem Cells-Adipose (HMSC-Ad)	FC-0034	10 ⁶ Cells		-150°C
StemLife™ MSC Medium Complete Kit	LL-0034	Kit	StemLife Basal Medium StemLife MSC LifeFactors™ Kit	2-8°C when prepared
Human Mesenchymal Stem Cells-Bone Marrow (HMSC-BM)	FC-0057	10 ⁶ Cells		-150°C
StemLife MSC-BM Medium Complete Kit	LL-0062	Kit	StemLife Basal Medium StemLife MSC-BM LifeFactors Kit	2-8°C when prepared
Human Pre-Adipocytes, Adult (HMSC-Pre-Adipocytes)	FC-0062	10 ⁶ Cells		-150°C
FibroLife™S2 Medium Complete Kit	LL-0011	Kit	FibroLife Basal Medium FibroLife S2 LifeFactors Kit	2-8°C when prepared



Call Lifeline Technical Service and Sales at 877.845.7787

Or visit lifelinecelltech.com for more information

Lifeline Cell Technology | 8415 Progress Drive, Suite T | Frederick, MD 21701

©2024 Lifeline Cell Technology, an International Stem Cell Company | All Rights Reserved

AdipoLife™ DfKt™-1 Adipogenesis Medium	LL-0050	Kit	AdipoLife Basal Medium DiffFactor™ 1 DiffFactor 2	2-8°C when prepared
AdipoLife DfKt-2 Adipogenesis Medium	LL-0059	Kit	AdipoLife Basal Medium DiffFactor 3	2-8°C when prepared
TrypKit™	LL-0013	Kit	PBS 0.05% Trypsin/0.02% EDTA Trypsin Neutralizing Solution	RT -20°C -20°C
Optional Supplements	Part No.	Volume	Concentrations of Supplement	Storage
Phenol Red Supplement	LS-1009	1 mL	33 mM	RT
Antimicrobial Supplement: Gentamicin and Amphotericin B (<i>Provided with purchase of LL-0011, LL-0034, or LL-0062</i>)	LS-1104	0.5 mL	Gentamicin 30 mg/mL Amphotericin B 15 µg/mL	-20°C



Call Lifeline Technical Service and Sales at **877.845.7787**
 Or visit **lifelinecelltech.com** for more information
 Lifeline Cell Technology | 8415 Progress Drive, Suite T | Frederick, MD 21701
 ©2024 Lifeline Cell Technology, an International Stem Cell Company | All Rights Reserved