



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 



# Instructions For Use

## ORK-IFU

205 South 600 West Logan, Utah 84323, U.S.A. – Tel. (800) 729-8350 – Tel. (435) 755-9848 – Fax (435) 755-0015 – www.scytek.com Rev. 3, 7/20/2022

## Oil Red O Stain Kit (For Fat)

### Description and Principle

Oil Red O Stain Kit (For Fat) is intended for use in the histological visualization of fat cells and neutral fat. This kit may be used **ONLY** on frozen tissue sections, fresh smears, or touch preps as xylenes and alcohols will dissolve fat deposits.

Fat staining occurs by absorption of oil red O into lipid substances. This is a physical method of staining that relies on greater solubility of oil red O in the lipid substance than in the dye solvent.

### Expected Results

|              |      |
|--------------|------|
| Fat Cells:   | Red  |
| Neutral Fat: | Red  |
| Nuclei:      | Blue |

### Kit Contents

1. Propylene Glycol
2. Oil Red O Solution
3. Hematoxylin, Mayer's (Lillie's Mod.)

### Storage

- 18-25°C
- 18-25°C
- 18-25°C

### Suggested Controls (not provided)

Any frozen section containing fat.

### Uses/Limitations

Not to be taken internally.  
For In-Vitro Diagnostic use only.  
Histological applications.  
Do not use past expiration date.  
Use caution when handling reagents.  
Non-Sterile

### Storage

Store kit and all components at room temperature (18-25°C).

### Safety and Precautions

Please see current Safety Data Sheets (SDS) for this product and components GHS classification, pictograms, and full hazard/precautionary statements.

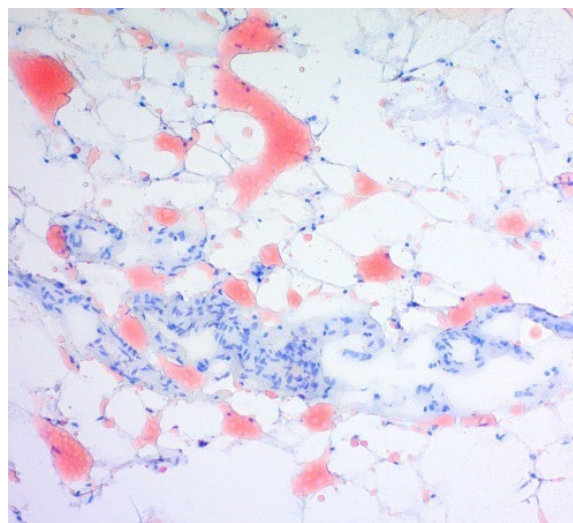
### Procedure (Standard):

**Note:** Heat Oil Red O Solution to 60°C prior to beginning.

1. Prepare fresh or frozen tissue section as usual.
2. Place slide in room temperature Propylene Glycol for 5 minutes.
3. Incubate slide in heated (60°C) Oil Red O Solution for 6-10 minutes or overnight at room temperature.

**Note:** Prepare mixture of 85% Propylene Glycol in distilled water.

4. Differentiate tissue section in 85% Propylene Glycol for 1 minute.
5. Rinse slide in 2 changes of distilled water.
6. Stain tissue section with Hematoxylin, Mayer's (Lillie's Modification) for 1-2 minutes.
7. Rinse slide thoroughly in tap water



Fat deposits in frozen Human Adipose tissue demonstrated with Oil Red O Stain Kit

8. Rinse slide in 2 changes of distilled water.
9. Coverslip using an aqueous mounting medium (cat# AML060).

### Procedure (Dropper):

**Note:** Heat Oil Red O Solution to 60° prior to beginning.

**Note:** This microwave procedure is meant to stain one slide at a time using steam from a warmed staining jar to heat and keep the slide hydrated during staining.

1. Prepare fresh or frozen tissue section as usual.
2. Apply 5-8 drops of room temperature Propylene Glycol for 5 minutes.
3. Fill a staining jar approximately 80% full with DI water. Place staining jar in microwave and heat until hot but not boiling.
4. Blot excess Propylene Glycol from slide.
5. Carefully place slide across the top of the un-capped staining jar and apply 5-8 drops of Oil Red O Solution and heat in microwave for 10 seconds. Leave jar with slide in the microwave for 6-10 minutes for staining.  
**Note: Prepare mixture of 85% Propylene Glycol in distilled water in graduated mixing vial.**
6. Differentiate tissue section in 85% Propylene Glycol for 1 minute.
7. Rinse slide in 2 changes of distilled water.
8. Stain tissue section with 5-8 drops of Hematoxylin, Mayer's (Lillie's Modification) for 1-2 minutes.
9. Rinse slide thoroughly in tap water.
10. Rinse slide in 2 changes of distilled water.
11. Coverslip using an aqueous mounting medium (cat# AML060)

## References

1. Seo MS, Kang KK, Oh SK, Sung SE, Kim KS, Kwon YS, Yun S. Isolation and Characterization of Feline Wharton's Jelly-Derived Mesenchymal Stem Cells. *Vet. Sci.* 2021, 8, 24.
2. Qi J, Kim JW, Zhou Z, Lim CW, Kim B. Ferroptosis Affects the Progression of Nonalcoholic Steatohepatitis via the Modulation of Lipid Peroxidation-Mediated Cell Death in Mice. *The American journal of pathology.* 2020 Jan 1;190(1):68-81.
3. Kim JW, Zhou Z, Yun H, Park S, Choi SJ, Lee SH, Lim CW, Lee K, Kim B. Cigarette smoking differentially regulates inflammatory responses in a mouse model of nonalcoholic steatohepatitis depending on exposure time point. *Food and Chemical Toxicology.* 2020 Jan 1;135:110930.
4. Jeong H, Kim JW, Yang D, Jeong TW, Zhao J, Seo JH, Shin DG, Cha JD, Han KM, Lim CW, Kim B. *Orostachys japonicus* A. Berger (Crassulaceae) exerts antidiabetic activity by improving glucose and lipid levels in Type 2 diabetic mice. *Journal of medicinal food.* 2019 Aug 1;22(8):797-809.
5. Crawford MS, Whisner C, Al-Nakkash L, Sweazea KL. Six-Week High-Fat Diet Alters the Gut Microbiome and Promotes Cecal Inflammation, Endotoxin Production, and Simple Steatosis without Obesity in Male Rats. *Lipids.* 2019 Feb;54(2-3):119-31.
6. Meyer S, Gessner DK, Wen G, Most E, Liebisch G, Zorn H, Ringseis R, Eder K. The antisteatotic and hypolipidemic effect of insect meal in obese Zucker rats is accompanied by profound changes in hepatic phospholipid and 1-carbon metabolism. *Molecular nutrition & food research.* 2019 Apr;63(8):1801305.
7. Choi N, Kim JW, Jeong H, Shin DG, Seo JH, Kim JH, Lim CW, Han KM, Kim B. Fermented ginseng, GBCK25, ameliorates steatosis and inflammation in nonalcoholic steatohepatitis model. *Journal of ginseng research.* 2019 Apr 1;43(2):196-208.
8. Meyer S, Gessner DK, Wen G, Most E, Liebisch G, Zorn H, Ringseis R, Eder K. The Antisteatotic and Hypolipidemic Effect of Insect Meal in Obese Zucker Rats is Accompanied by Profound Changes in Hepatic Phospholipid and 1-Carbon Metabolism. *Molecular nutrition & food research.* 2019 Jan 27;1801305.
9. Lin YS, Chang TH, Shi CS, Wang YZ, Ho WC, Huang HD, Chang ST, Pan KL, Chen MC. Liver X Receptor/Retinoid X Receptor Pathway Plays a Regulatory Role in Pacing-Induced Cardiomyopathy. *Journal of the American Heart Association.* 2019 Jan 8;8(1):e009146.
10. Kim JW, Roh YS, Jeong H, Yi HK, Lee MH, Lim CW, Kim B. Spliceosome-associated protein 130 exacerbates alcohol-induced liver injury by inducing NLRP3 inflammasome-mediated IL-1 $\beta$  in mice. *The American journal of pathology.* 2018 Apr 1;188(4):967-80.
11. Chen MC, Chang JP, Lin YS, Pan KL, Ho WC, Liu WH, Chang TH, Huang YK, Fang CY, Chen CJ. Deciphering the gene expression profile of peroxisome proliferator-activated receptor signaling pathway in the left atria of patients with mitral regurgitation. *Journal of translational medicine.* 2016 Jun 2;14(1):1.
12. Chen MC, Chang JP, Lin YS, Pan KL, Ho WC, Liu WH, Chang TH, Huang YK, Fang CY, Chen CJ. Deciphering the gene expression profile of peroxisome proliferator-activated receptor signaling pathway in the left atria of patients with mitral regurgitation. *Journal of translational medicine.* 2016 Dec;14(1):1-9.
13. Archer J. *Cytology of the Urinary Tract. Manual of Diagnostic Cytology of the Dog and Cat.* 2014 Feb 14:161-73.
14. Bashur CA, Eagleton MJ, Ramamurthi A. Impact of electrospun conduit fiber diameter and enclosing pouch pore size on vascular constructs grown within rat peritoneal cavities. *Tissue Engineering Part A.* 2013 Apr 1;19(7-8):809-23.
15. A. Nor Khaizan and T. W. Wong, "Microwave: Effects and Implications in Transdermal Drug Delivery," *Progress In Electromagnetics Research*, vol. 141, pp. 619-643, 2013.
16. L. W. Pfefferle and G. A. Wray, "Insights from a Chimpanzee Adipose Stromal Cell Population: Opportunities for Adult Stem Cells to Expand Primate Functional Genomics," *Genome Biology and Evolution*, vol. 5, no. 10, pp. 1995-2005, Jan. 2013.
17. Wong TW, Khaizan AN. Physicochemical modulation of skin barrier by microwave for transdermal drug delivery. *Pharmaceutical research.* 2013 Jan;30(1):90-103.
18. Gerlach JC, Over P, Turner ME, Thompson RL, Foka HG, Chen WC, Péault B, Gridelli B, Schmelzer E. Perivascular mesenchymal progenitors in human fetal and adult liver. *Stem cells and development.* 2012 Dec 10;21(18):3258-69.
19. Hopkins, P.M. et al. Oil red O stain of alveolar macrophages is an effective screening test for gastroesophageal reflux disease in lung transplant recipients. *The Journal of Heart and Lung Transplantation.* 2010 August; 29(8): pages 859-864.
20. Clark, G., et al. *Staining Procedures*; 4th Edition, 1981.
21. Sheehan, DC., Hrapchak, BB. *Theory and Practice of Histotechnology*; 1980, page 225.



ScyTek Laboratories, Inc.  
205 South 600 West  
Logan, UT 84321  
435-755-9848  
U.S.A.



EC REP

Emergo Europe  
Prinsessegracht 20  
2514 AP The Hague, The Netherlands