

RETICULIN/NUCLEAR FAST RED STAIN KIT (SS015-25)

INTENDED USE

BioMarq Reticulin Nuclear Fast Red Stain Kit is used for *in vitro* diagnostic use. Reticulin stain is used to identify reticulin fibers in the basement membrane of the tissues. Reticular fibers characteristics can aid in the diagnosis of certain tumors. In addition, changes in reticular pattern can be seen in some liver diseases. The results using this product should be interpreted by a qualified pathologist in conjunction with the patient's relevant clinical history, other diagnostic tests and proper controls.

PRODUCT DESCRIPTION

The tissue sections are initially oxidized in an oxidizing agent (KMnO₄). Then a sensitizer (Iron alum) is used to expose the oxidized sites, where added silver can go and bind. Then silver is readily precipitated using a reducing agent (formalin solution). Finally an intensifier is added to intensify the stained reticulin fibers using gold chloride.

KIT CONTENTS

Potassium Permanganate Solution (SS045-8D)	
1X8ml	
Oxalic Acid (SS046-8D)	1X8ml
Ferric ammonium sulphate (SS047-8D)	1X8ml
Aqueous Formalin (SS048-8D)	1X8ml
Gold Chloride (SS025-8D)	1X8ml
Hypo (SS054-8D)	1X8ml
Silver Stock (SS049-5D)	1X5ml
Silver diluent (SS050-5D)	1X5ml
Nuclear Fast Red (SS010-8D)	1X8ml

MATERIALS REQUIRED BUT NOT PROVIDED

Microscope slides
Xylene/ Xylene substitute
Reagent alcohol/Ethanol
Deionized or distilled water
SS Wash Solution (Catalog No WB005-DC)
Positive Control Slides
Mounting Solutions

STORAGE AND STABILITY

Store at 2-8°C. Do not freeze. Not to be used beyond the expiration date prescribed on label.

SPECIMEN PREPARATION

Fixation: 10% NBF

Paraffin Sections: Cut sections at 4-5 microns.

PREPARATION OF WORKING SOLUTION

Ammonical Silver Nitrate Solution: Add Reticulin Stock Solution to Reticulin Diluent in 1:1 ratio in the empty vial and Mix well. Reticulin working solution is stable for 1 day after preparation & discard.

RECOMMENDED PROTOCOL

Deparaffinize with xylene/ xylene substitute and rehydrate through graded alcohols to deionized water. Wash the slide with SS Wash Solution for 3 times.

Stain the slides with 300ul of Potassium Permanganate solution for 3 min. Wash the slide with SS Wash Solution for 3 times.

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Incubate the slides with 300ul of Oxalic Acid for 1 min.
Wash the slide with SS Wash Solution for 3 times.

Stain the slides with 300ul of Ferric ammonium sulphate solution for 10 min. Wash the slide with SS Wash Solution for 3 times.

Stain the slides with 300ul of Reticulin working solution for 1 min. Wash the slide with SS Wash Solution for 3 times.

Stain the slides with 300ul of Aqueous Formalin for 30sec-1 min. Wash the slide with SS Wash Solution for 3 times.

Stain the slides with 300ul of Gold Chloride for 1 min. Wash the slide with SS Wash Solution for 3 times.

Now add 300ul of Hypo for 2min & Wash the slide with SS Wash Solution for 3 times.

Counter stain the slides with 300ul of Nuclear fast red soln for 5min & wash with SS wash Solution for 3 times.

Dehydrate, clear in xylene or its substitute & mount the slides with BioMarq XY-Mount (Catalog No MS002) or using BioMarq T-Mount (Catalog No MS003).

TECHNICAL NOTE

Bring all reagents to RT before use

Gently invert all reagents prior to use

Thickness of section may affect the intensity of staining

Users can also procure the Positive Control Slides available from BioMarq for their Quality Control purpose

Follow the protocol recommendations provided in the data sheet. If atypical results occur, contact BioMarq Technical Support at 040-29702960.

RECOMMENDED CONTROL

LIVER AND KIDNEY

STAINING INTERPRETATION

Reticulin fibers – Black
Other tissue components- Pink

For image please visit our web site www.biomarq.net

PRECAUTIONS

Specimens should be handled carefully before and after the assay to avoid transmission of infection and disposed of with proper precautions

When working with Special Stain chemicals, always wear a suitable lab coat, disposable gloves, and protective goggles

For detailed safety information related to BioMarq Products, please refer to appropriate safety data sheets (SDS) available online at www.biomarq.net

REFERENCES

1. Heng Hong et al, Unusual reticulin staining pattern in well-differentiated hepatocellular carcinoma, Diagn Pathol, 2011 Feb 22.
2. Murli Krishna, M.D et al, Role of special stains in diagnostic liver pathology, CLD a Multimedia review journal, 2013 March 29.
3. Elizabeth M. Brunt M.D et al, Histopathologic features of hepatocellular carcinoma, CLD a Multimedia review journal, 2012 December.