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Microscopy

Nuclear fast red (C.I. 60760)

for microscopy Certistain®



In Vitro Diagnostic Medical Device



This staining dye “Nuclear fast red (C.I. 60760) - for microscopy Certistain®” is used for human-medical cell diagnosis and serves the purpose of the histological investigation of sample material of human origin. It is a dry staining dye that is used to prepare a staining solution, that when used together with other in vitro diagnostic products from our portfolio makes target structures (by fixing, where necessary embedding, staining with the above nuclear fast red solution, counterstaining, mounting) in human-histological specimen materials, for example histological sections of e.g. the kidney, evaluable for diagnostic purposes.

Principle

Nuclear fast red can be used for simple nuclear staining. It is an acidic dye belonging to the group of anthraquinone dyes. Aluminum sulfate, functioning as a mordant, is added to form a color lake that enables red nuclear staining.

Nuclear fast red-aluminum sulfate is used for counterstaining in histochemical reactions, e.g. in Berlin blue staining for detection of iron (e.g. Cat. No. 107907, DNA staining kit according to Feulgen) or in silver staining (e.g. Cat. No. 100251, Reticulin silver plating kit acc. to Gordon & Sweets or Cat. No. 100362, Silver plating kit acc. to von Kossa).

Nuclear fast red (C.I. 60760) - for microscopy Certistain® can also be used for nuclear staining with alcian blue.

Sample material

Sections of formalin-fixed, paraffin-embedded tissue (3 - 5 µm thick paraffin sections) just as fresh, native blood or bone-marrow smears are used as starting material.

Reagents

Cat. No. 115939
Nuclear fast red (C.I. 60760) 25 g, 1 kg
for microscopy Certistain®

Also required:

Cat. No. 101102 Aluminium sulfate-18-hydrate 5 kg
extra pure Ph Eur, BP

for Alcian blue staining:

Cat. No. 101647 Alcian blue solution 500 ml
for microscopy

Alternatively:

Cat. No. 100121 Nuclear fast red-aluminium sulfate solution 0.1% 500 ml
for microscopy

Sample prepration

The sampling must be performed by qualified personnel.

All samples must be treated using state-of-the-art technology.

All samples must be clearly labeled.

Suitable instruments must be used for taking samples and their preparation. Follow the manufacturer's instructions for application / use.

Deparaffinize and rehydrate sections in the conventional manner.

Reagent preparation

Staining can be carried out using either a ready-to-use (Cat. No. 100121) or a separately prepared Nuclear fast red-aluminium sulfate solution (prepared from Cat. No. 115939).

Aluminium sulfate solution 5 %, aqueous

Dissolve 12.5 g of Aluminium sulfate-18-hydrate in 237.5 ml of distilled water.

Nuclear fast red-aluminium sulfate solution 0.1 %

Stir 0.2 g Nuclear fast red Certistain® into 200 ml boiling aluminium sulfate solution 5 %, aqueous.

Boil for 5 - 10 minutes.

Cool and filter the freshly prepared staining solution.

Nuclear staining / Overview staining

Procedure

Staining in the staining cell

Deparaffinize histological slides in the conventional manner and rehydrate in a descending alcohol series.

The slides should be allowed to drip off well after the individual staining steps, as a measure to avoid any unnecessary cross-contamination of solutions.

The stated times should be adhered to to guarantee an optimal staining result.

Slide with histological specimen	
Distilled water	1 min
Nuclear fast red-aluminum sulfate solution 0.1%	10 min
Distilled water	1 min
Ethanol 70 %	1 min
Ethanol 96 %	1 min
Ethanol 100 %	1 min
Ethanol 100 %	1 min
Xylene	5 min
Xylene	5 min
Mount the xylene-wet slides with e.g. Entellan® new and cover glass.	

After dehydration (ascending alcohol series) and clarification with xylene, histological samples can be mounted with water-free mounting agents (e.g. Entellan® new) and a cover glass and can then be stored.

The use of immersion oil is recommended for the analysis of stained slides with a microscopic magnification >40x.

Result

Cell nuclei dark red
Cytoplasm light red

Counterstaining

Procedure

Staining protocols with examples for the use of nuclear fast red as a counterstaining agent can be found in the corresponding instructions for use of the products in our portfolio (e.g. Alcian blue Certistain®, Cat. No. 105234, Reticulin silver plating kit acc. to Gordon & Sweets, Cat. No. 100251, Silver plating kit acc. to von Kossa, Cat. No. 100362).

Technical notes

The microscope used should meet the requirements of a medical diagnostic laboratory.

When using histoprocessors and automatic staining systems, please follow the instructions for use supplied by the supplier of the system and software.

Cool and filter the freshly prepared staining solution.

Remove surplus immersion oil before filing.

Diagnostics

Diagnoses are to be made only by authorized and trained personnel.

Valid nomenclatures must be used.

Further tests must be selected and implemented according to recognized methods.

Suitable controls (e.g. ISOSLIDE® Reticulin, Cat. No. 1.00361.0001) should be conducted with each application in order to avoid an incorrect result.

Storage

Store Nuclear fast red (C.I. 60760) - for microscopy Certistain® at +5 °C to +30 °C.

Shelf-life

Nuclear fast red (C.I. 60760) - for microscopy Certistain® can be used until the stated expiry date.

After first opening of the bottle, the contents can be used up to the stated expiry date when stored at +5 °C to +30 °C.

The bottles must be kept tightly closed at all times.

Additional instructions

For professional use only.

In order to avoid errors, the application must be carried out by qualified personnel only.

National guidelines for work safety and quality assurance must be followed.

Microscopes equipped according to the standard must be used.

Protection against infection

Effective measures must be taken to protect against infection in line with laboratory guidelines.

Instructions for disposal

The package must be disposed of in accordance with the current disposal guidelines.

Used solutions and solutions that are past their shelf-life must be disposed of as special waste in accordance with local guidelines. Information on disposal can be obtained under the Quick Link "Hints for Disposal of Microscopy Products" at www.microscopy-products.com. Within the EU the currently applicable REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 applies.

Auxiliary reagents

Cat. No.	100121	Nuclear fast red-aluminium sulfate solution 0.1% for microscopy	500 ml
Cat. No.	100251	Reticulin silver plating kit acc. to Gordon & Sweets for the detection of reticular fibers in histological tissue specimens	1 set
Cat. No.	103661	ISOSLIDE® Reticulin Control Slides with reference tissue for the detection of reticular fibres in histology	25 tests
Cat. No.	100362	Silver plating kit acc. to von Kossa for the detection of microcalcification	1 set
Cat. No.	100496	Formaldehyde solution 4%, buffered, pH 6.9 (approx. 10% Formalin solution) for histology	350 ml and 700 ml (in wide neck bottle), 5 l, 10 l, 10 l Tritripac®
Cat. No.	100579	DPX new non-aqueous mounting medium for microscopy	500 ml
Cat. No.	100869	Entellan® new for cover slipper for microscopy	500 ml
Cat. No.	100974	Ethanol denatured with about 1 % methyl ethyl ketone for analysis EMSURE®	1 l, 2.5 l
Cat. No.	101647	Alcian blue solution for microscopy	500 ml
Cat. No.	104699	Immersion oil for microscopy	100-ml dropping bottle, 100 ml, 500 ml
Cat. No.	107907	DNA staining kit according to Feulgen For the quantitative determination of DNA content in histological and cytological samples	1 set
Cat. No.	107961	Entellan® new rapid mounting medium for microscopy	100 ml, 500 ml, 1 l
Cat. No.	108298	Xylene (isomeric mixture) for histology	4 l
Cat. No.	109016	Neo-Mount® anhydrous mounting medium for microscopy	100-ml dropping bottle, 500 ml
Cat. No.	109843	Neo-Clear® (xylene substitute) for microscopy	5 l
Cat. No.	112084	HEMATOGNOST Fe® staining kit for the detection of free ionic iron (Fe ³⁺) in cells	4x 250 ml
Cat. No.	115161	Histosec® pastilles (without DMSO) solidification point 56-58°C embedding agent for histology	10 kg (4x 2.5 kg), 25 kg

Hazard classification

Cat. No. 115939

Please observe the hazard classification printed on the label and the information given in the safety data sheet.

The safety data sheet is available on the website and on request.

Main components of the product

Cat. No. 115939

C.I. 60760

C₁₄H₉NNaO₇S

M = 357.28 g/mol

Other IVD products

Cat. No.	100380	ISOSLIDE® Iron Control Slides with reference tissue for the detection of free iron in histological tissue	25 tests
Cat. No.	100425	ISOSLIDE® Alcian blue Control Slides with reference tissue for the detection of acid mucosubstances in histological tissue	25 tests
Cat. No.	105174	Hematoxylin solution modified acc. to Gill III for microscopy	500 ml, 1 l, 2.5 l
Cat. No.	117081	Eosin Y solution 1%, alcoholic for microscopy	1 l

Literature

1. Romeis - Mikroskopische Technik, Editors: Mulisch, Maria, Welsch, Ulrich, 2015, Springer-Verlag Berlin Heidelberg
2. Theory and Practice of Histological Techniques, John D Bancroft and Marilyn Gamble, 6th Edition
3. Conn's Biological Stains: A Handbook of Dyes, Stains and Fluorochromes for Use in Biology and Medicine, 10th Edition, (ed. Horobin, R.W. and Kiernan, J.A). Bios, 2002



Consult instructions for use



Manufacturer



Catalog number



Batch code



Caution, consult accompanying documents



Use by YYYY-MM-DD



Temperature limitation

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