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苏木素伊红(HE)染色液(醇溶)

产品简介：

苏木素(Hematoxylin)和伊红(Eosin)联合染色简称 HE 染色，是病理学常规制片中最基本的染色方法，应用极其广泛，苏木精是从原产于中南美州的洋苏木中提取出来的浅黄褐色的结晶，是一种碱性染色剂，它在被氧化后生成苏木素，同媒染剂(常用的是三价的铝或盐铁)一起使用，能够使细胞核染色。在病理诊断、教学和科研工作中，常用 HE 染色对正常组织和病变组织进行形态结构观察，可确定或鉴别病变组织、细胞中出现的某些异常物质与特殊成分，而需要采用的特殊染色方法、酶组织化学方法、免疫组织化学方法等也均是在观察 HE 染色组织切片的基础上进行的，在 HE 染色的组织切片中细胞核呈蓝色，细胞浆呈红色，二者形成鲜明的对比，易于观察分析。

Leagene 苏木素伊红染色液中苏木素染色液采用 Leagene 自主研发的配方，由进口的高纯度苏木精、氧化剂等组成，不含氧化汞、甲醇等有害物质，对细胞核染色效果好，其特点是不易产生沉淀和金属膜；应用范围广，可以用于人、动物、畜牧、水产等领域，可以用于组织石蜡切片、冰冻切片和组织细胞的染色等，苏木素染色液和伊红染色液均可重复使用。

染色原理：

1、细胞核染色原理：苏木素为碱性天然染料，可使细胞核着色，细胞核内染色质的成分主要是 DNA，在 DNA 双螺旋结构中两条核苷酸链上的磷酸基向外，使 DNA 双螺旋的外侧带负电荷，呈酸性，很容易与带正电荷的苏木素碱性染料以离子键或氢键结合而被染色。苏木素在碱性溶液中呈蓝色，所以细胞核被染成蓝色。

2、细胞浆染色原理：伊红是一种化学合成的酸性染料，在一定条件下可使细胞浆着色，细胞浆的主要成分是蛋白质，为两性化合物，细胞浆的染色与染液的 pH 值密切相关，当染色液 pH 值在胞浆蛋白质等电点(4.7～5.0)以下时，胞浆蛋白质以碱式电离，则细胞浆带正电荷，就可被带负电荷的酸性染料染色。伊红在水中离解成带负电荷的阴离子，与胞浆蛋白质带正电荷的阳离子结合，使细胞浆着色，呈现红色。

3、分化作用：染色后，用某些特定的溶液将组织过多结合的染色剂脱去，这个过程称为分化作用，所用的溶液称为分化液。在 HE 染色中常用 0.5－1%盐酸乙醇作为分化液，因酸能破坏苏木素的醌型结构，使组织与色素分离而退色。大多数组织经苏木素染色后，必须用盐酸乙醇分化，使细胞核过多结合的苏木素染料和细胞浆吸附的苏木素染料脱去，再进行伊红染色，才能保证细胞核与细胞浆染色的分明。

4、返蓝作用：分化之后，苏木素在酸性条件下处于红色离子状态，呈红色；在碱性条件下处于蓝色离子状态，呈蓝色。组织切片经酸性乙醇分化后呈红色或粉红色，立即用水除去组

织切片上的酸而中止分化，再用弱碱性水使苏木素染上的细胞核呈现蓝色，这个过程称为返蓝作用或蓝化作用，另外用自来水(尤其是温水)浸洗也可使细胞核返蓝，但所需时间较长。

产品组成：

编号 / 名称	DH0006 2×100ml	DH0006 2×500ml	Storage
试剂(A): Leagene 苏木素染色液	100ml	500ml	RT
试剂(B): 伊红染色液(醇溶)	100ml	500ml	RT
使用说明书	1 份		

自备材料：

1、自来水或蒸馏水、二甲苯或浸蜡脱蜡透明液、盐酸乙醇分化液、系列乙醇、中性树胶

2、蓝化液（稀氨水、碳酸锂溶液等）、乙醚-乙醇混合固定液、4%多聚甲醛

操作步骤(仅供参考)：

(一)石蜡切片染色

1、切片脱蜡至水

①二甲苯或浸蜡脱蜡透明液(Leagene DZ2011)作用 2 次，每次 5～10min。

②(可选)无水乙醇作用 2 次，每次 3～5min。

③95%乙醇 3～5min

④90%乙醇 3～5min

⑤80%乙醇 3～5min

⑥自来水或蒸馏水(亦可用 30~40℃温水)冲洗 1～3min

2、染色

①Leagene 苏木素染色液染色 3～8min

②自来水或蒸馏水冲洗 5～10s

③(可选)盐酸乙醇分化 2～5s

④自来水冲洗 20～30s

⑤蓝化液或温水返蓝 20～40s

⑥80%乙醇脱水 30～60s

⑦伊红染色液(醇溶)染色 20～120s

3、脱水、透明、封固

①80%乙醇 10～20s

②90%乙醇 10～20s

③95%乙醇作用 2 次，每次 1～2min。

④无水乙醇作用 2 次，每次 2～3min。

⑤二甲苯或浸蜡脱蜡透明液(Leagene DZ2011)透明 3 次，每次 2～3min。

⑥中性树胶封片。

(二)冰冻切片染色

1、乙醚-乙醇混合固定液 5～10s

2、自来水冲洗 2～5s

3、Leagene 苏木素染色液滴染 1～2min(可加热至 50℃)。

4、自来水冲洗 2～5s

5、(可选)盐酸乙醇分化 2～5s

6、自来水冲洗 2～5s

7、蓝化液或温水返蓝 2～5s

8、80%乙醇脱水 5～10s

9、伊红染色液(醇溶)染色 2～5s

10、80%乙醇 1～2s

11、95%乙醇 1～2s

12、无水乙醇 2～5s

13、苯酚二甲苯(1:3) 2～5s

14、二甲苯或浸蜡脱蜡透明液(Leagene DZ2011)透明 3 次，每次 2～5s。

15、中性树胶封片。

(三)细胞染色

1、4%多聚甲醛固定 10～20min。

2、自来水冲洗 2 次，每次 2min。

3、蒸馏水冲洗 2 次，每次 2min。

4、染色、脱蜡、透明、封固步骤同石蜡切片的染色步骤，作用时间应相应缩短。

染色结果：

细胞核呈蓝色；

细胞质、肌纤维、胶原纤维、甲状腺胶质等呈深浅不一的红色；

角蛋白、红细胞等呈明亮的橙红色。

注意事项：

1、 切片脱蜡应尽量干净；温度低时，可在恒温箱 60~70℃处理。

2、 系列乙醇应经常更换新液。

3、 盐酸乙醇分化时间应根据切片厚薄、组织类别以及新旧而定，另外分化后自来水冲洗时间应该足够，以便彻底清洗酸。

4、 乙醚-乙醇混合固定液是由乙醚和 95%乙醇等量混合而得，再加入适量乙酸，密闭保存。

5、 冷冻切片染色时间尽量要短。

6、 蓝化液常使用 0.2～1%氨水或 Scott 促蓝液或 0.1～1%碳酸锂溶液。

7、 为了您的安全和健康，请穿实验服并戴一次性手套操作。

有效期：12 个月有效。常温运输和保存。

相关产品：

产品编号	产品名称
CS0001	ACK 红细胞裂解液(ACK Lysis Buffer)
DC0032	Masson 三色染色液
DF0135	组织细胞固定液(4% PFA)
DH0059	Scott 蓝化液
DH0085	酸性乙醇分化液(1%)
DP0013	GUS 染色液(即用型)
DZ2011	环保浸蜡脱蜡透明液
PE0103	Acr-Bis(30%,29:1)
PW0082	丽春红 S 染色液(1×Ponceau S)
TC0699	植物总糖和还原糖检测试剂盒(DNS 比色法)
TO1013	丙二醛(MDA)检测试剂盒(TBA 比色法)

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