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钙盐染色液(Von Kossa 银法)

产品简介：

钙在人体内大量存在,构成骨骼作为支持人体的支架,在分泌、运送、肌肉收缩、神经传导等也起重要作用,钙在机体内以两种形式存在,一种是离子钙,存在血液循环内,即所谓血钙;另一种是结合钙,和蛋白、碳酸或磷酸结合而沉着在组织内,除骨骼和牙齿外正常时钙渗透在所有组织和细胞中,一般不以固体状态出现在组织内,但在某些情况下钙析出成固体并沉着于组织内,则为病理性钙盐沉着,沉着的钙盐主要是磷酸钙,其次为碳酸钙。钙盐通常是单折射的,但草酸钙是双折射的,当使用 HE 染色时钙一般呈紫蓝色,许多染料可以于钙形成螯合物,包括茜素红 S、红紫素、核固红等,茜素红 S 属一种蒽醌类衍生物,是茜素磺酸钠盐,它能与碳酸钙或磷酸钙中的钙盐螯合形成橙红色复合物。

钙盐染色常用方法有硝酸银法和茜素红 S 法,钙盐染色液(Von Kossa 银法)又称冯库萨染色液,属金属置换法,其原理在于 Von Kossa 银溶液作用于含有不溶性钙盐的切片时,钙被银置换,银盐在光的作用下被还原为黑色金属银,适用于大量样本的钙盐组织染色。该试剂仅用于科研领域,不适用于临床诊断或其他用途。

产品组成：

编号 / 名称	DS0003 2×50ml	Storage
试剂(A): Von Kossa 银溶液	50ml	4℃ 避光
试剂(B): 海波溶液	50ml	RT
试剂(C): Von Kossa 对照液	10ml	4℃
使用说明书	1 份	

自备材料：

1、10%中性福尔马林固定液、系列乙醇、蒸馏水、环保脱蜡透明液、中性树胶

2、HE 染色液或 Van Gieson 染色液、碳酸锂水溶液

操作步骤(仅供参考)：

一、常规染色

1、组织固定于 10%中性福尔马林固定液,常规脱水包埋。

2、切片厚度 3~5μm,常规二甲苯或 Leagene 脱蜡透明液脱蜡至水,蒸馏水洗。

3、切片入 Von Kossa 银溶液,强光照射 15~60min(见注意事项 2),蒸馏水洗 1min。

4、入海波溶液处理 2min,HE 染色液或 Van Gieson 复染细胞核 1min。

5、 常规脱水,二甲苯或 Leagene 脱蜡透明液透明,中性树胶封固。

二、不溶性钙染色

1、 组织固定于 10%中性福尔马林固定液,常规脱水,注意在 95%乙醇中脱水应充分。

2、 塑料包埋,室温过夜,37℃烤箱中聚合 2~4 天,-20℃冰箱冷却 15~20min。

3、 切片厚度 3~5μm,未脱钙骨切片脱塑至水,蒸馏水洗。

4、 切片入 Von Kossa 银溶液,强光照射 10~60min(见注意事项 2),蒸馏水洗。

5、 入海波溶液处理 2min,HE 染色液、中性红或 Van Gieson 复染细胞核 1min。

6、 常规脱水,二甲苯或 Leagene 脱蜡透明液透明,中性树胶封固。

染色结果:

钙盐、尿酸盐	黑褐色至深黑色
细胞核	根据复染液不同而不同

阴性对照: 如有必要,可做阴性对照。取另外一张连续切片脱蜡(脱塑)至水,置于 Von Kossa 对照液处理 10~20min,蒸馏水冲洗,与试验片一同入 Von Kossa 银溶液,余下步骤同上,结果应为阴性。

注意事项:

1、 钙盐组织固定以中性福尔马林为佳,不宜采用 Bouin 液等酸性固定液和甲醛钙固定液;如用常规的 10%福尔马林固定,固定 4～6h 后即可进行脱水包埋,以防止固定液酸化导致钙盐溶解。

2、 作用时间取决于阳光照射时光的强度和时间;如暴露于强光下 15min 已经足够;如暴露于紫外灯下 10min 即可;如暴露于一般光线下,宜适当延长曝光时间。

3、 如果钙盐染色过深,可用蒸馏水适当稀释 Von Kossa 银溶液或减少光照时间或光照强度;如果钙盐染色较浅,应增加 Von Kossa 银溶液用量并增加光照时间和光照强度。

4、 该染色法可以区分尿酸盐和钙盐,其原理在于钙盐不溶解于碳酸锂溶液,尿酸盐则易溶。因此,切片经碳酸锂处理后入 Von Kossa 银溶液并置于强光下照射,呈阴性者为尿酸盐。

5、 试剂开封后请尽快使用,以防影响后续实验效果。

有效期: 12 个月有效;低温运输,按要求保存。

相关产品:

产品编号	产品名称
DC0032	Masson 三色染色液
DF0135	组织细胞固定液(4% PFA)
DH0006	苏木素伊红(HE)染色液(醇溶)
TC0699	植物总糖和还原糖检测试剂盒(DNS 比色法)

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