

## 普鲁士蓝染色试剂盒(二价铁, 增强型)

V02

货号: G1429

规格: 4×20mL

保存: 2-8°C, 避光保存, 有效期 1 年。

### 产品组成:

试剂名称		4×20mL	保存
试剂(A):Perls 染色工作液	试剂(A1):Perls A 液	10mL	室温, 避光
	试剂(A2):Perls B 液	10mL	室温
临用前按照 1: 1 混匀即为 Perls 染色工作液。			
试剂(B): 孵育液		20mL	2-8°C, 避光
试剂(C): 浓缩增强液	试剂(C1):增强 A 液	1mL	2-8°C, 避光
	试剂(C2):增强 B 液	1mL	2-8°C, 避光
临用前按照 C1:C2:1×PBS=1:1:18 的比例混匀配制增强工作液, 现配现用。			
试剂(D):复染液		20mL	室温, 避光

### 产品介绍:

普鲁士蓝二价铁染色法是常规普鲁士蓝(Perl's method)染色法的一个变体, 能够通过形成蓝色的滕氏蓝沉淀的形式, 显示细胞和组织中非血红素二价铁。然而, 对于非铁过载的细胞和组织, 运用此法常常由于蓝色沉淀形成过少而呈现假阴性, 对细胞衰老或药物诱导的细胞或组织铁死亡有良好的显示效果。

普鲁士蓝染色试剂盒(二价铁, 增强型)在常规滕氏蓝染色基础上, 利用级联放大的原理对亚铁离子阳性信号进行了放大显示, 适用于含亚铁离子较不丰富或沉积较少的样本二价铁染色。该产品采用高纯度原料, 染色结果清晰稳定, 可重复性高。

### 自备材料:

恒温箱或水浴锅、湿盒、1×PBS、蒸馏水

### 操作步骤: (仅供参考)

1. 组织石蜡包埋切成 3-7um 的切片。切片常规脱蜡复水。
2. 试剂盒从冰箱取出复温 20min 至室温(25-30°C), 湿盒注水置于 37°C 恒温箱预热 20min。
3. 按照 1: 1 的比例配置 Perls 染色工作液, 滴加到切片上至完全覆盖组织, 置于湿盒内 37°C 孵育 20min。
4. 取出切片, 蒸馏水轻轻冲洗 3 次, 每次 10s。
5. 切片滴加孵育液至完全覆盖组织, 置于湿盒内 37°C 孵育 10-20min。(见注意事项 4)
6. 取出切片, 1×PBS 轻轻浸洗 3 次, 每次 60s。按照 C1:C2:1×PBS=1: 1: 18 的比例配置工作液, 稀释后的工作液可在 2-8°C 保存 1 周。
7. 切片滴加增强工作液至完全覆盖组织, 置于湿盒内 37°C 孵育 10-20min。(见注意事项 5)
8. (可选)取出切片, 1×PBS 轻轻浸洗 3 次, 每次 5s, 滴加复染液染色 3-5min。
9. 蒸馏水浸洗 10min。
10. 梯度乙醇脱水, 二甲苯透明, 中性树胶封片。

### 染色结果:

二价铁	棕黄色到棕褐色
细胞核	浅蓝色
胞质	浅棕色或无色

### 注意事项:

1. 避免使用酸性固定液处理组织, 铬酸盐处理也会影响铁的存在。
2. 该试剂盒可用于石蜡切片、冰冻切片、培养细胞和塑封切片的多种类型样本染色, 但是受限于二价铁





稳定性，常规石蜡切片只能用于定性判定。如需更高精度建议组织灌注染色后取材制备切片，如无法灌注建议制备速冻切片染色。

3. 所有工作液久置容易失效，建议现用现配，在 2 小时内使用完毕。
4. 孵育工作液孵育时间建议参考组织大小和细胞密度进行适当调整。
5. 增强工作液处理建议镜下控制着色程度，当阳性细胞着黄棕色到棕黑色时即可。
6. 如无法保证 37°C 恒温处理可根据室温适当延长或缩短处理时间。
7. 为了您的安全和健康，请穿实验服并戴一次性手套操作。

#### 相关产品：

- G1420 普鲁士蓝染色试剂盒(中性红法)
- G1422 普鲁士蓝染色试剂盒(核固红法)
- G1424 普鲁士蓝染色试剂盒(伊红法)
- G1426 普鲁士蓝染色试剂盒(细胞专用)
- G1428 普鲁士蓝染色试剂盒(三价铁，增强法)
- G3310 lillie 三价铁染色试剂盒
- G3320 lillie 二价铁染色试剂盒



## Prussian Blue Iron Stain Kit (Ferrous Iron, Enhance With DAB) V02

**Cat:** G1429

**Size:** 4×20mL

**Storage:** 2-8°C, avoid light, valid for 1 year.

### Kit components

Reagent		4×20mL	Storage
Reagent(A):Perls Working Solution	A1:Perls Solution A	10mL	RT, avoid light
	A2:Perls Solution B	10mL	RT
Before use, mix A1 with A2 in equal amount to prepare Perls Working Solution.			
Reagent(B):Incubation Solution		20mL	2-8°C, avoid light
Reagent(C): Enhanced Solution	C1:Enhanced Solution A	1mL	2-8°C, avoid light
	C2:Enhanced Solution B	1mL	2-8°C, avoid light
Before use, mix C1, C2 with 1×PBS in 1:1:18 ratio to prepare Enhanced Working Solution, it is ready to use.			
Reagent(D):Redyeing Solution		20mL	RT, avoid light

### Introduction

The Turnbull's blue staining method is a variant of the Perl's blue staining method, which can display non heme divalent iron in cells and tissues by forming a blue precipitate of Turnbull's blue. However, for non iron overloaded cells and tissues, this method often presents false negatives due to insufficient formation of blue precipitates, which has a good display effect on cell aging or drug-induced cell or tissue iron death.

The Prussian Blue Iron Stain Kit (Ferrous Iron, Enhance With DAB) amplifies and displays the positive signal of ferrous ions using the principle of cascade amplification on the basis of conventional Turnbull's blue staining. It is suitable for ferrous iron staining of samples with less ferrous iron deposition. This product uses high-purity raw materials, with clear and stable dyeing results and high repeatability.

### Self Provided Materials

Thermostat or water bath, wet box, 1 × PBS, distilled water

### Protocols(for reference only)

- Cut the tissue in paraffin sections of 3-7µm. Dewax the slices to water routinely.
- Take out the kit from the refrigerator and rewarm it for 20min to room temperature (25-30 °C), inject water into the wet box and preheat it in a 37 °C incubator for 20min.
- Prepare Perls Working Solution in the ratio of 1:1, drop it onto the slices until the tissues are completely covered, and incubate in a wet box at 37 °C for 20min.
- Take out the slices, gently rinse them with distilled water for three times, 10s each time.
- Drip Incubation Solution onto the slices until the tissue are completely covered, and incubate in a wet box at 37 °C for 10-20min. (see note 4)
- Take out the slices, gently soak with 1×PBS for three times, 60s each time. According to C1: C2:1×PBS=1:1:18 to prepare Enhanced Working Solution, the working solution can be stored at 2-8°C for one week.
- Drip Enhanced Working Solution onto the slices until the tissue are completely covered, and incubate in a wet box at 37 °C for 10-20min. (see note 5)
- Take out the slice, gently soak with 1×PBS for three times, 5s each time, and stain with Redyeing Solution for 3-5min.
- Soak in distilled water for 10min.
- Dehydrate in gradient ethanol, transparent by xylene and seal with resinene.

### Result

Ferrous Ions	Yellow Brown or Brown
Nucleus	Light Blue
Cytoplasm	Light Brown or Colorless





## Note

1. Avoid using acidic fixatives to treat tissues. Chromate treatment will also affect the presence of iron.
2. All working solution are easy to lose effect after a long time. It is recommended to use and prepare them now and use them within 2 hours.
3. The incubation time of Incubation Working Solution should be adjusted appropriately due to tissue size and cell density.
4. To enhance the treatment of working solution, it is recommended to control the staining degree under the microscope, when the positive cells are yellow brown to brown black.
5. If the constant temperature treatment at 37 °C cannot be guaranteed, the treatment time can be appropriately extended or shortened according to the room temperature.
6. For your safety and health, please wear experimental clothes and disposable gloves.

## Related products

- G1420 *Prussian Blue Iron Stain Kit (With Neutral Red)*
- G1422 *Prussian Blue Iron Stain Kit (With Nuclear Fast Red)*
- G1424 *Prussian Blue Iron Stain Kit (With Eosin)*
- G1426 *Prussian Blue Iron Stain Kit (For Cells)*
- G1428 *Prussian Blue Iron Stain Kit (Enhance With DAB)*
- G3310 *Lillie's Ferric Iron Stain Kit*
- G3320 *Lillie's Ferrous Iron Stain Kit*

