β-半乳糖苷酶定色剂

货号： G2195
规格： 100mL
保存： 2-8℃, 避光保存, 有效期 6 个月。

产品介绍：

β-半乳糖苷酶是一种是细胞溶酶体中的水解酶，能把乳糖水解成葡萄糖和半乳糖的酶，广泛存在于动植物界中。常用于原核表达平台的阳性克隆筛选、基因调控标记和细胞衰老情况标记。

绝大多数正常细胞被认为仅有有限的分裂能力，在不能分裂后就进入衰老(senescence)状态。衰老的细胞不能在一些常规的刺激下再诱导细胞分裂，常体积变大，并表达在 pH6.0 时有高酶活性的特殊衰老相关β-半乳糖苷酶(SA-β-gal)。由于该酶的特殊 pH 活性和与细胞衰老的高度相关性，因此也被认定为细胞或组织衰老的金标准。

β-半乳糖苷酶定色剂是专为β-半乳糖苷酶设计的酶保护型固定液，相比甲醛固定液或多聚甲醛固定液而言对酶活损伤更小，能在相对较长的时间里保证各型半乳糖苷酶活性稳定，便于后续的切片染色检测。

操作步骤：(*仅供参考*)

1、 取新鲜组织，生理盐水浸洗去除血污。
2、 从冰箱取出β-半乳糖苷酶定色剂，分取适量置于离心管中。（见注意事项1）
3、 将清洗后的组织浸于定色剂中2-8℃固定0.2-3天。（见注意事项2）
4、 系列蔗糖或系列乙醇脱水二甲苯透明。
5、 OCT包埋或低温（50-54℃）石蜡包埋。
6、 冰冻切片切8-20um，石蜡切片切3-5um，复水后可用于后续染色检测。

注意事项：

1、 建议添加组织10-15倍体积的固定液，保证固定充分。
2、 建议置于低温摇床固定保存或第2-4小时、10-12小时、22-24小时摇晃混匀一次，随后置于2-8℃可保存至少2周。
3、 组织取材的厚度不同，固定时间也不同。建议取材2～4mm固定至少4小时，一般不建议单样本超过6mm。对组织恰当的选材有利于固定液的渗透。
4、 为了您的安全和健康，请穿实验服并戴一次性手套操作。

β-Galactosidase Colorimetric Solution

Cat: G2195
Size: 100mL
Storage: 2-8℃, avoid light, valid for 6 months.

Introduction

β-Galactosidase(β-Gal) is a hydrolytic enzyme in the cell lysosome that hydrolyzes lactose into glucose and galactose, widely present in the animal and plant kingdom. Commonly used for positive clone screening, gene regulatory markers, and cell aging markers on prokaryotic expression platforms.

The vast majority of normal cells are considered to have limited division ability and enter an aging state after being unable to divide. Aging cells cannot be induced to undergo cell division under conventional stimuli, often resulting in increased volume and expression of special aging related enzymes with high enzyme activity at pH 6.0 β- Galactosidase (SA-β-Gal). Due to its unique pH activity and high correlation with cellular aging, this enzyme has also been recognized as the gold standard for cellular or tissue aging.

β-Galactosidase Colorimetric Solution is an enzyme protective fixative designed specifically for galactosidase.Compared to formaldehyde fixative or polyformaldehyde fixative, it has less damage to enzyme activity and can ensure the stability of various types of galactosidase activity for a relatively long time, making it convenient for subsequent staining and detection of slices.

Protocol(*for reference only*)

1. Take fresh tissue and soak it in physiological saline to remove blood stains.
2. Take out the β-Galactosidase Colorimetric Solution from the refrigerator and place an appropriate amount in a centrifuge tube. (See Note 1)
3. Soak the cleaned tissue in a fixative at 2-8 ℃ for 0.2-3 days. (See Note 2)
4. Series sucrose or series ethanol dehydrated xylene transparent.
5. OCT embedding or low-temperature (50-54 ℃) paraffin embedding.
6. Frozen sections are cut for 8-20um, paraffin sections are cut for 3-5 um, and can be used for subsequent staining detection after rehydration.

Note

1. It is recommended to add 10-15 times the volume of tissue fixative to ensure sufficient fixation.
2. It is recommended to place it in a low-temperature shaking table for fixed storage or shake and mix it well at 2-4 h, 10-12 h, 22-24 h, and then store it at 2-8 ℃ for at least 2 weeks.
3. The thickness of tissue sampling varies, and the fixation time also varies. It is recommended to take 2-4mm samples and fix them for at least 4 hours. Generally, it is not recommended to use a single sample exceeding 6mm. Proper material selection for the organization is beneficial for the penetration of the fixative.
4. For your safety and health, please wear laboratory clothes and disposable gloves for operation.