

## DiBAC4(5) 膜电位荧光探针

| 产品编号         | 产品名称              | 包装规格 | 价格   |
|--------------|-------------------|------|------|
| NBS3222-25mg | DiBAC4(5) 膜电位荧光探针 | 25mg | 2915 |

**【温馨提示】：**见我司整理的[膜电位荧光探针产品专题](#)。

### 产品简介：

慢速响应探针 (Slow-response probes) 包括阳离子碳花菁、罗丹明和阴离子氧鎓醇，都适用于检测非兴奋细胞因呼吸活性、离子通道渗透性、药物结合和其他因素引起的平均膜电位变化。

DiBAC4(5)(Bis-(1,3-dibutylbarbituric acid)pentamethine oxonol)是带阴离子的慢速响应电位敏感探针，在 pH4.5~7.5 的范围内表现出非 pH 敏感的荧光特征（最大激发和发射波长分别为 590nm 和 616nm）。能够进入去极化细胞，之后结合到胞内蛋白或膜上。一旦结合，DiBAC4(5)的荧光特性加强，往红光区迁移。增加的细胞去极化引起增多的染料内流和增高的荧光信号。DiBAC4(5)的负电荷阻止其进入线粒体，因此，适用于细胞膜电位测定。

### 产品特性：

- 1) CAS NO: 63560-89-4
- 2) 同义名: Bis-(1,3-dibutylbarbituric acid)pentamethine oxonol
- 3) 分子式: C<sub>29</sub>H<sub>42</sub>N<sub>4</sub>O<sub>6</sub>
- 4) 分子量: 542.67g/mol
- 5) Ex/Em: 590/616 nm
- 6) 溶解性: 溶于 DMSO

### 保存条件：

-20℃干燥避光保存，有效期至少一年。

### 产品使用：(仅供参考)

文献来源：Zhang Y et al. A Membrane Potential- and Calpain-Dependent Reversal of Caspase-1

Inhibition Regulates Canonical NLRP3 Inflammasome. Cell Rep. 2018 Aug 28;24(9):2356-2369.e5.

**实验方法 (膜电位染色):** DiBAC4(5) is a translocational MP dyes that redistributes within the cell membrane as MP changes. MP depolarization results in an increase in fluorescence intensity of cells at Ex/Em = 590/616nm. Conversely, hyperpolarization is indicated by a decrease in fluorescence. PMA-differentiated THP-1 cells were cultured in 35mm imaging dish with a concentration of  $4 \times 10^5$  cells/ml. Cells were stained in 200 nM DiBAC4(5) in 5mM K<sup>+</sup> buffer at 37°C for 30 min. Then the staining buffer was removed without washing and crystals (silica, Al(OH)<sub>3</sub>, CPPD) or inhibitors (glyburide or CFTRinh-172) in fresh 5mM K<sup>+</sup> buffer containing 200nM DiBAC4(5) was added to the cells. For high K<sup>+</sup> condition, staining buffer was replaced with 100mM K<sup>+</sup> buffer containing 200nM DiBAC4(5). We captured 5 different fields at each time-point on fluorescent microscope, and analyzed the fluorescence intensity of all the cells by ImageJ.

### 实验结果 (膜电位染色):

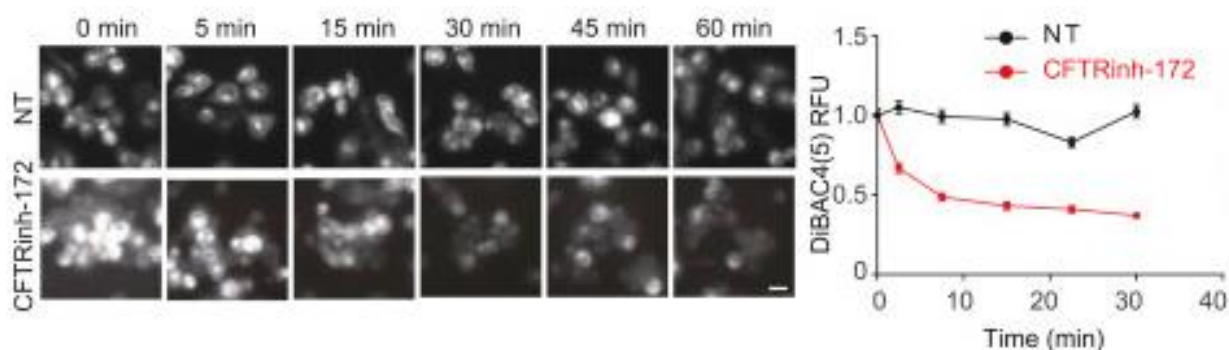


Fig. Depolarization or Hyperpolarization of Membrane Potential May Affect the Activation of NLRP3 Inflammasome. THP-1 cells were stained with DiBAC4(5) to check the effect of CFTRinh-172 on MP. Representative images and relative fluorescence unit (RFU) plotting are shown. Each point was mean  $\pm$  SEM of cells from at least 12 fields in 2 independent experiments. Scale bar, 20  $\mu$ m.

### 注意事项:

1. 本品用有机溶剂 (比如: DMSO) 配制的储存液, 请根据单次用量分装, 置于  $\leq -20^{\circ}\text{C}$  避光保存。
2. 荧光染料均存在淬灭问题, 请尽量注意避光, 以减缓荧光淬灭。
3. 为了您的安全和健康, 请穿实验服并戴一次性手套操作。

本产品仅用于生命科学研究, 不得用于医学诊断及其他用途!

## 相关产品：

| 产品编号                | 产品名称                                            | 包装规格 |
|---------------------|-------------------------------------------------|------|
| <u>NBS3218-25mg</u> | <u>DiOC2(3) 绿色膜电位荧光探针</u>                       | 25mg |
| <u>NBS3219-10mg</u> | <u>DiOC6(3) 内质网荧光探针</u>                         | 10mg |
| <u>NBS3220-5mg</u>  | <u>DiBAC4(3) 膜电位荧光探针</u>                        | 5mg  |
| <u>NBS3221-25mg</u> | <u>DiSBAC2(3)膜电位荧光探针</u>                        | 25mg |
| <u>NBS3222-25mg</u> | <u>DiBAC4(5) 膜电位荧光探针</u>                        | 25mg |
| <u>NBS3223-25mg</u> | <u>DiOC5(3)膜电位荧光探针</u>                          | 25mg |
| <u>NBS3224-10mg</u> | <u>DiSC3(5) 膜电位荧光探针</u>                         | 10mg |
| <u>NBS3225-50mg</u> | <u>DiSC2(7) 膜电位荧光探针</u>                         | 50mg |
| <u>NBS3226-50mg</u> | <u>DiSC2(5) 膜电位荧光探针</u>                         | 50mg |
| <u>NBS3227-1mg</u>  | <u>Di-4-ANEPPS 膜电位荧光探针</u>                      | 1mg  |
| <u>NBS3228-5mg</u>  | <u>Di-8-ANEPPS 膜电位荧光探针</u>                      | 5mg  |
| <u>NBS3229-5mg</u>  | <u>Di-2-ANEPEQ (JPW 1114) 膜电位荧光探针</u>           | 5mg  |
| <u>NBS3230-25mg</u> | <u>Tetramethylrhodamine Ethyl Ester (TMRE)</u>  | 25mg |
| <u>NBS3231-25mg</u> | <u>Tetramethylrhodamine Methyl Ester (TMRM)</u> | 25mg |