



## hROS Detection Kit

### Product Information

#### Cat.No.

Kit-0467

#### Product Overview

A selective indicator for the detection of Highly Reactive Oxygen Species, hROS.

#### Description

A new novel probe, Aminophenyl fluorescein (APF), developed by Tetsuo Nagano et. al. (1), is a general selective indicator for the detection of highly Reactive Oxygen Species (hROS). The probe has little reactivity towards other ROS such as: singlet oxygen ( $O_2^1$ ), superoxide ( $O_2^{\bullet-}$ ), hydrogen peroxide ( $H_2O_2$ ), nitric oxide ( $NO^{\bullet}$ ), and alkyl peroxide ( $RO_2^{\bullet}$ ) (see table below)1. APF is a cell permeable indicator that can be used to detect Hydroxyl Radical ( $\cdot OH$ ), Peroxynitrite: ( $ONOO^-$ ) and hypochlorite ( $-OCl$ ) production in cells. Several fluorescent probes such as 2',7'-dichlorodihydrofluorescein (DCFH) and di-hydrorhodamine123, have been developed to detect Reactive Oxygen Species (ROS). As Hempel and co-workers have indicated, DCFH and di-hydrorhodamine123 can react with various ROS and oxidizing species such as hydrogen peroxide, hypochlorite, superoxide, nitric oxide, ferrous ion, and others. These probes should be considered as detecting a broad range of ROS.

#### Applications

Flow Cytometer, Fluorescence Microscope, Fluorescence plate reader

#### Usage

1. For Research use only. Not for use in diagnostic procedures. 2. Practice safe laboratory procedures by wearing protective clothing and eyewear.

#### Storage

1. Long Term Storage: Store contents as labeled. 2. Upon Arrival: 2-8°C. 3. Aminophenyl fluorescein (APF) and Hydroxyphenyl fluorescein (HPF) should be stored at 4-80°C. Protect from light until ready to use. The diluted material must be used immediately and discard any unused diluted material.



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Assay Kit

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### Kit Components

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One vial of APF

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### Features & Benefits

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1. Quenched Cell permeable dye.2. One Step, No wash Homogenous assay.3. Adaptable to High throughput assay platforms.4. Can monitor multiple time points to follow real time kinetics.5. Non-destructive cell based assay allows monitoring of additional parameters.6. Applications-Fluorescent plate reader/Flow Cytometry/Fluorescent Microscopy.

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