



Atto Corporation

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Instruction Manual

AB-2950 MPEC

Usage:

Measurement of superoxide and anti-oxide ability. MPEC reacts specifically with O_2^- .

Substance Identification:

- SUBSTANCE: Reagent for Chemiluminescent Superoxide Probe
- NAME: MPEC
- MODEL No. AB-2590
- VOLUME: 5 mg
- CHEMICAL FAMILY: 2-methyl-6-p-methoxyphenylethynyl-imidazopyrazinone
- MOLECULAR FORMULA: $C_{16}H_{13}N_3O_2$
- MOLECULAR WEIGHT: 279.1008

Physical Data:

- DESCRIPTION: Brown powder
- MELTING POINT: 182 – 185 °C
- SOLVENT SOLUBILITY: Soluble in alcohol

How to use:

- Dissolve in alcohol before use. Dilute the solvent with alcohol, distilled water, or buffer down to designated concentration.
- Do not leave resulted solution for a long time when you use phosphate buffer or HEPES buffer to dilute. If so, the solution will turn to be transparent and useless.
- Freeze at -20°C to store.
- Do not store after diluting.

Applications

1. Detection of superoxide

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|---|-------------|
| • MPEC (300 μ M) | 10 μ L |
| • Xanthine oxidase | 60 μ L |
| • 0.1M Potassium Phosphate Buffer (pH 7.5). | 180 μ L |
| • 0.72 mM Hypoxanthine (pH 7.5) | 50 μ L |

2. Measurement of anti-oxide ability

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|---|-------------|
| • Sample 10 μ L | |
| • MPEC (300 μ M) | 10 μ L |
| • Xanthine oxidase 0.1 unit/mL | 60 μ L |
| • 0.1M Potassium Phosphate Buffer (pH 7.5). | 170 μ L |
| • 0.72 mM Hypoxanthine (pH 7.5) | 50 μ L |

Reference:

O. Shimomura, Chun Wu, A. Murai, and H. Nakamura (1998)

Evaluation of Five Imidazopyrazinone – Type Chemiluminescent Superoxide Probes and Their Application to the Measurement of Superoxide Anion Generated by *Listeria monocytogenes*. Anal Biochem. 258, 230-235