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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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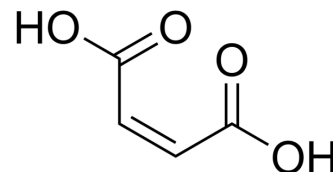
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Maleic Acid

| | | | |
|--------------------|--|-------|----------|
| Cat. No.: | HY-Y0367 | | |
| CAS No.: | 110-16-7 | | |
| Molecular Formula: | C ₄ H ₄ O ₄ | | |
| Molecular Weight: | 116.07 | | |
| Target: | Endogenous Metabolite; Bacterial | | |
| Pathway: | Metabolic Enzyme/Protease; Anti-infection | | |
| Storage: | Powder | -20°C | 3 years |
| | | 4°C | 2 years |
| | In solvent | -80°C | 6 months |
| | | -20°C | 1 month |



SOLVENT & SOLUBILITY

| | | | | | |
|---|---|--------------------------|-----------|------------|------------|
| In Vitro | H ₂ O : 100 mg/mL (861.55 mM; Need ultrasonic) | | | | |
| | | Solvent Concentration | Mass | | |
| | Preparing Stock Solutions | | 1 mg | 5 mg | 10 mg |
| | | 1 mM | 8.6155 mL | 43.0775 mL | 86.1549 mL |
| | | 5 mM | 1.7231 mL | 8.6155 mL | 17.2310 mL |
| | 10 mM | 0.8615 mL | 4.3077 mL | 8.6155 mL | |
| Please refer to the solubility information to select the appropriate solvent. | | | | | |
| In Vivo | 1. Add each solvent one by one: PBS Solubility: 100 mg/mL (861.55 mM); Clear solution; Need ultrasonic | | | | |

BIOLOGICAL ACTIVITY

| | | | |
|---------------------------|--|-----------------------------|--|
| Description | Maleic Acid is a Glutamate Decarboxylase (GAD) inhibitor of <i>E. coli</i> and <i>L. monocytogenes</i> . | | |
| IC ₅₀ & Target | GAD | Human Endogenous Metabolite | |
| In Vitro | <p>The MICs of WT 10403S for the acids (e.g., Maleic Acid) are 34 mM, 25 mM, 31 mM and 30 mM which correspond to pH values prior to growth of 4.84, 5.14, 5.32 and 5.02 respectively. Of all compounds tested, Maleic Acid is the least inhibitory despite acting at a lower pH (4.84). The most acid resistant (10403S) and the weakest (EGD-e) strain are challenged with 8.6 mM and 4.3 mM of each organic acid at pH 3 and 3.3 respectively. On both strains, Maleic Acid is the most bactericidal^[2].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> | | |

CUSTOMER VALIDATION

- Cells. 2023 Feb 28.

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REFERENCES

- [1]. Fonda ML, et al. Glutamate decarboxylase. Substrate specificity and inhibition by carboxylic acids. *Biochemistry*. 1972 Mar 28;11(7):1304-9.
- [2]. Paudyal R, et al. A novel approach in acidic disinfection through inhibition of acid resistance mechanisms; Maleic acid-mediated inhibition of glutamate decarboxylase activity enhances acid sensitivity of *Listeria monocytogenes*. *Food Microbiol*. 2018 Feb;69:96-104.
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Caution: Product has not been fully validated for medical applications. For research use only.

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