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Diagnostik & molekulare Diagnostik



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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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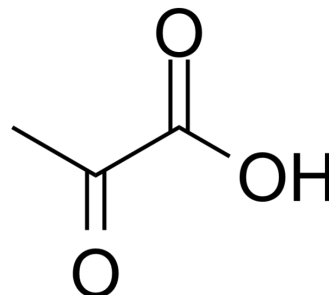
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Pyruvic acid (Standard)

Cat. No.:	HY-Y0781R
CAS No.:	127-17-3
Molecular Formula:	C ₃ H ₄ O ₃
Molecular Weight:	88.06
Target:	Endogenous Metabolite
Pathway:	Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Pyruvic acid (Standard) is the analytical standard of Pyruvic acid. This product is intended for research and analytical applications. Pyruvic acid is an intermediate metabolite in the metabolism of carbohydrates, proteins, and fats.									
In Vitro	Pyruvic acid standard (0.1-1 mM, 24 h) inhibits mitochondrial damage, exhibits antioxidant and protective effects against Cu²⁺, Zn²⁺ or H₂O₂ induced neurotoxicity in GT1-7 and N-2A cells^{[2][3]}. Pyruvic acid standard (1-5 mM, 48 h) promotes the differentiation of RAW264.7 cells into osteoclasts^[4]. MCE has not independently confirmed the accuracy of these methods. They are for reference only. Cell Viability Assay^[2] <table><tr><td>Cell Line:</td><td>N-2A cell</td></tr><tr><td>Concentration:</td><td>0.1-1 mM</td></tr><tr><td>Incubation Time:</td><td>24 h</td></tr><tr><td>Result:</td><td>Maintained cell viability.</td></tr></table>		Cell Line:	N-2A cell	Concentration:	0.1-1 mM	Incubation Time:	24 h	Result:	Maintained cell viability.
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Concentration:	0.1-1 mM									
Incubation Time:	24 h									
Result:	Maintained cell viability.									

REFERENCES

- [1]. Kladna A, et al. Reactivity of pyruvic acid and its derivatives towards reactive oxygen species. Luminescence. 2015 Nov;30(7):1153-8.
- [2]. Liu G, et al. Role of pyruvic acid in osteoclast differentiation[J]. Chinese Journal of Tissue Engineering Research, 2023, 27(31): 5015.
- [3]. Tanaka KI, et al., Pyruvic acid prevents Cu²⁺/Zn²⁺-induced neurotoxicity by suppressing mitochondrial injury. Biochem Biophys Res Commun. 2018 Jan 1;495(1):1335-1341.
- [4]. Mazzio EA, et al., Cytoprotection of pyruvic acid and reduced beta-nicotinamide adenine dinucleotide against hydrogen peroxide toxicity in neuroblastoma cells. Neurochem Res. 2003 May;28(5):733-41.

Caution: Product has not been fully validated for medical applications. For research use only.

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