

PRODUCT INFORMATION

Amine Oxidase (*Arthrobacter* strain FB24, recombinant)

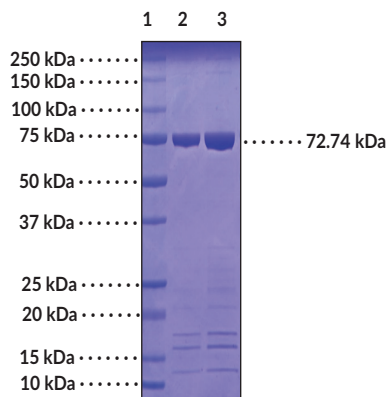
Item No. 41326

Overview and Properties

Synonyms:	Copper Amine Oxidase, Tyramine Oxidase
Source:	Active recombinant <i>Arthrobacter</i> (strain FB24) N-terminal His-tagged amine oxidase expressed in <i>E. coli</i>
Amino Acids:	2-641
Uniprot No.:	A0K0Q7
Molecular Weight:	72.74 kDa
Storage:	-80°C (as supplied)
Stability:	≥1 year
Purity:	batch specific (≥70% estimated by SDS-PAGE)
Supplied in:	Lyophilized from 50 mM Tris, pH 7.5, with 0.5% sucrose and 0.3% BSA
Specific Activity:	batch specific U/mg
Unit Definition:	One unit is defined as the amount of enzyme required to oxidize 1 nmol of tyramine per minute at 37°C in 100 mM Tris-HCl, pH 7.5.

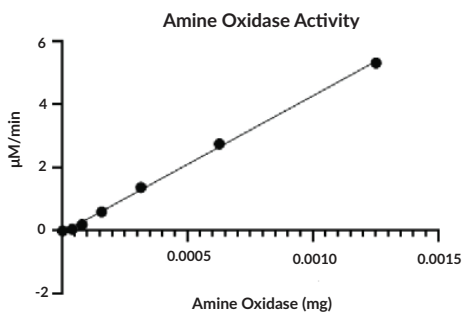
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Images



Lane 1: MW Markers
Lane 2: Amine Oxidase (2 µg)
Lane 3: Amine Oxidase (4 µg)

Representative gel image shown; actual purity may vary between each batch.



Amine oxidase (*Arthrobacter* strain FB24, recombinant) enzyme activity was determined by measuring the absorbance at 546 nm in the presence of 0.5 mM tyramine (Item No. 18601), 1.25 mM TOOS, and 0.75 mM 4-aminoantipyrine (4-AAP).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

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Description

Arthrobacter amine oxidase is a copper-dependent amine oxidase.¹ It exists as a homodimer and uses topaquinone as a cofactor.² Amine oxidase catalyzes the oxidation of a primary amine to a carbonyl resulting in the production of ammonia and hydrogen peroxide.^{2,3} It has broad substrate specificity, oxidizing substrates such as tyramine, histamine, hexylamine, and agmatine, as well as herbicide-derived amines.^{1,3} Amine oxidase has been used in a coupled-enzyme assay to measure phosphatidylethanolamine levels in isolated human plasma.¹ Cayman's Amine Oxidase (*Arthrobacter* strain FB24, recombinant) protein contains a His-tag followed by a thrombin cleavage site and can be used for enzyme activity assay and Western blot (WB) applications.

References

1. Ota, H., Tamezane, H., Sasano, Y., *et al.* Enzymatic characterization of an amine oxidase from *Arthrobacter* sp. used to measure phosphatidylethanolamine. *Biosci. Biotechnol. Biochem.* **72**(10), 2732-2738 (2008).
2. Wilce, M.C., Dooley, D.M., Freeman, H.C., *et al.* Crystal structures of the copper-containing amine oxidase from *Arthrobacter globiformis* in the holo and apo forms: Implications for the biogenesis of topaquinone. *Biochemistry* **36**(51), 16116-16133 (1997).
3. Shapir, N., Monogodin, E.F., Sadowsky, M.J., *et al.* Evolution of catabolic pathways: Genomic insights into microbial s-triazine metabolism. *J. Bacteriol.* **189**(3), 674-682 (2007).

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