Product Information

Choline Oxidase from *Arthrobacter sp.*, recombinant, expressed in *Escherichia coli*

Catalog Number SAE0044
Storage Temperature –20 °C

CAS RN 9028-67-5
EC 1.1.3.17
Synonyms: Choline: oxygen 1-oxidoreductase

**Product Description**
Choline oxidase from *Arthrobacter sp.* is a flavoprotein, and is a member of the GMC-oxidoreductase family. The enzyme catalyzes the four-electron oxidation of choline to glycine betaine via the intermediate betaine aldehyde, in two sequential FAD-dependent reaction steps. The enzyme is useful for enzymatic determination of phosphatidylcholine by coupling with phospholipase D, determination of sphingomyelin by coupling with sphingomyelinase, and for cholinesterase activity assays.

**Precautions and Disclaimer**
This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

**Preparation Instructions**
It is recommended to reconstitute the Choline Oxidase product in phosphate buffer, pH 7.5, with 10 mM EDTA. Reconstituted material can be stored at 2–8 °C for at least 2 weeks.

**Storage**
Store the product desiccated at –20 °C.

**Unit definition:**
One unit will form 1 µmole of H$_2$O$_2$ with oxidation of 1 µmole of choline to betaine aldehyde per minute at pH 8.0 at 37 °C.

**Note:** During the conversion of choline to betaine by choline oxidase, 2 µmoles of H$_2$O$_2$ are produced for every µmole of choline.

**Product Profile**

**Figure 1.**
Short Term Thermal Stability of Choline Oxidase from *Arthrobacter Sp.*

Reconstituted enzyme was incubated for 15 minutes at indicated temperatures and then assayed under standard conditions. Activity is shown as percent of control.

**Figure 2.**
pH Dependence of Choline Oxidase from *Arthrobacter sp.*

Activity is shown as percent of control.
Figure 3.
Extended Stability Study of Reconstituted Choline Oxidase from *Arthrobacter sp.* at 37 °C.

Activity is shown as percent of control.

References