

Data Sheet



EUCODIS Nitrile Hydratase Kit

| Cat. No. | Formulation | Sales Unit |
|----------|---------------------|-------------|
| ENH Kit | freeze-dried powder | min. 100 mg |

For *in vitro* use only.
Store at -20°C.

Applications

Nitrile hydratases can be utilized to convert nitriles into their corresponding amides. Please note, that the kit enzymes can also be supplied as whole cell biocatalysts in large scale.

Form

10 vials
Screening grade, freeze-dried cell extract
White to tan powder
Protein content ~50-70 %

Specifications

| | |
|-------------------|-----------------------------|
| Name | Nitrile Hydratase Kit |
| E.C. | 4.2.1.84 |
| Origin | bacterial |
| Source | recombinant, <i>E. coli</i> |
| Specific Activity | ≥10 U/mg powder |

The EUCODIS Nitrile Hydratase Kit contains each of the following nitrile hydratases:

| EUCODIS Nitrile Hydratase Kit | | | |
|-------------------------------|--------|--------|--------|
| ENH001 | ENH005 | ENH010 | ENH014 |
| ENH017 | ENH019 | ENH020 | ENH021 |
| ENH022 | ENH023 | | |

Function

Nitrile hydratases catalyze the hydration of nitriles to their corresponding amides.

Currently, nitrile hydratases are used to produce acrylamide from acrylonitrile. Additional applications include the removal of nitriles from industrial wastewater.

Usage

EUCODIS nitrile hydratase powders are partly soluble in water. If required, remove the insoluble material by centrifugation. The enzymes should be protected from high temperatures and excessive moisture.

Reconstitute the content of one vial in 4-10 mL water or 20 mM potassium phosphate buffer, pH 7.5.

Store at -20°C after reconstitution.

Activity

Specific activities have been determined using acrylonitrile; see batch-specific certificate of analysis (CoA). One unit corresponds to the conversion of 1 μmol nitrile to the corresponding amide per minute at 25°C.

Additionally, EUCODIS nitrile hydratases have been tested for hydrolysis of the following substrates:

cyclohexanecarbonitrile, cinnamionitrile, benzonitrile, methacrylonitrile, pivalonitrile.

Example:

