

## xanthine dehydrogenase

Cat. No. EXWM-1082

Lot. No. (See product label)

### Introduction

**Description** Acts on a variety of purines and aldehydes, including hypoxanthine. The mammalian enzyme can also convert all-trans retinol to all-trans-retinoate, while the substrate is bound to a retinoid-binding protein. The enzyme from eukaryotes contains [2Fe-2S], FAD and a molybdenum centre. The mammalian enzyme predominantly exists as the NAD-dependent dehydrogenase (EC 1.17.1.4). During purification the enzyme is largely converted to an O<sub>2</sub>-dependent form, xanthine oxidase (EC 1.17.3.2). The conversion can be triggered by several mechanisms, including the oxidation of cysteine thiols to form disulfide bonds [which can be catalysed by EC 1.8.4.7, enzyme-thiol transhydrogenase (glutathione-disulfide) in the presence of glutathione disulfide] or limited proteolysis, which results in irreversible conversion. The conversion can also occur in vivo.

**Synonyms** NAD<sup>+</sup>-xanthine dehydrogenase; xanthine-NAD<sup>+</sup> oxidoreductase; xanthine/NAD<sup>+</sup> oxidoreductase; xanthine oxidoreductase

### Product Information

**Form** Liquid or lyophilized powder

**EC Number** EC 1.17.1.4

**CAS No.** 9054-84-6

**Reaction** xanthine + NAD<sup>+</sup> + H<sub>2</sub>O = urate + NADH + H<sup>+</sup>

**Notes** This item requires custom production and lead time is between 5-9 weeks. We can custom produce according to your specifications.

### Storage and Shipping Information

**Storage** Store it at +4 °C for short term. For long term storage, store it at -20 °C~-80 °C.