CYTOCHROME P450 REDUCTASE
From Rabbit Liver, induced with Phenobarbital
Product Number C4839
Storage Temperature -20° C

EC# 1.6.2.4

Synonyms: NADPH:Ferrihemoprotein oxidoreductase

Product Description
Solution in 50% glycerol containing 30 mM potassium phosphate, pH 7.7, and 0.1 mM EDTA

Storage/Stability
Store at -20°C. The enzyme is stable for at least 4 weeks at 4°C.

Product Profile
The main role of the Cytochrome P450 enzyme system is participation in the detoxification of xenobiotics in the liver. It also participates in the activation of procarcinogens and the metabolism of other endogeneous substrates such as steroids. Cytochrome P450 reductase catalyzes the reduction of hemethiolate-dependent monooxygenases such as EC 1.14.14.1 (unspecified xenobiotic monooxygenases) and is part of the microsomal hydroxylating system. This reductase is a flavoprotein containing FMN and FAD. The enzyme was estimated by SDS-PAGE to have a molecular weight of about 80 kD. It also reduces cytochrome b5 and cytochrome c.

The enzyme catalyzes the following reactions:
NADPH + H+ + 2 cytochrome c3+ -------> NADP+ + 2 cytochrome c2+ + 2 H+
NADPH + H+ + dye ------> reduced dye + NADP+
NADPH + H+ + O2 ------> H2O2 + NADP+

Unit Definition: One unit will cause the reduction of 1.0 µmole of cytochrome c (Product No. C2506) by NADPH per minute at pH 7.7 at 30°C.

References