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ProductInformation

S9 from Liver, Pooled
from male mouse (CD-1)

Product Number **S 2192**
Storage Temperature -70 °C

Product Description

This product is a buffered solution containing the S9 fraction from a pool of livers from male mice (CD-1). The mice were 11 weeks old.

Many xenobiotics, neurotransmitters, steroids, and other hormones are metabolized by sulfate conjugation, a reaction catalyzed by the class of sulfotransferase enzymes. The common sulfate group donor is adenosine 3'-phosphate 5'-phosphosulfate.

The cytochrome P450 proteins are heme-containing enzymes that constitute the major enzymatic system for metabolism of xenobiotics. Thus, cytochromes P450 are involved in the biosynthesis and metabolism of steroids, bile acids, fatty acids, prostaglandins, leukotrienes, biogenic amines, and retinoids.

The product is supplied in a solution containing 50 mM Tris-HCl, pH 7.5, with 2.0 mM EDTA and 150 mM KCl. The protein content is a minimum of 20 mg/ml and is reported on a lot-to-lot basis. Each vial contains 1.0 ml of the preparation.

Precautions and Disclaimer

This product is for laboratory research use only. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

The product is shipped on dry ice and it is recommended to store the product at –70 °C. If not using the entire contents, aliquot to minimize freeze-thaw cycles.

Product Profile

Sulfotransferase Activity:
Determined as 7-hydroxycoumarin sulfotransferase activity. Incubations were conducted at 0.4 mg/ml of S9 protein in 100 mM Tris, pH 7.5, 0.1 mM adenosine 3'-phosphate 5'-phosphosulfate, and 25 µM 7-hydroxycoumarin as substrate for 10 minutes at 37 °C. One unit will produce 1 picomole of 7-hydroxycoumarin sulfate per minute at pH 7.5 at 37 °C.

Cytochrome P450 Activity:
Determined as 6β-testosterone hydroylase activity. Incubations were conducted at 0.5 mg/ml of S9 protein in 100 mM potassium phosphate, pH 7.4, 3.3 mM $MgCl_2$, and 200 µM testosterone as substrate for 20 minutes at 37 °C with an NADPH generating system (1.3 mM NADP, 3.3 mM glucose 6-phosphate, and 0.4 units/ml of glucose 6-phosphate dehydrogenase). One unit will produce 1 picomole of 6β-hydroxytestosterone per minute at pH 7.4 at 37 °C.

References

1. Tulik, G.R., et al., Inhibition of Bovine Phenol Sulfotransferase (bSULT1A1) by CoA Thioesters. J. Biol. Chem., **277**, 39296-39303 (2002).
2. Handschin, C., et al., Cholesterol and Bile Acids Regulate Xenosenor Signaling in Drug-mediated Induction of Cytochromes P450. J. Biol. Chem., **277**, 29561-29567 (2002).

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