

Product Information

S9 from Liver, Pooled from male monkey (Cynomolgus)

Product Number **S 1942**

Storage Temperature –70 °C

Product Description

This product is a buffered solution containing the S9 fraction from a pool of livers from male monkeys (Cynomolgus). The monkeys are sexually mature.

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

Cytochrome P450 (CYP) 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.

All animals are colony bread. Animals are tested sero-negative for the following pathogens: Simian retrovirus type D (SRV/D), Simian T-cell leukemia virus (STLV-1), Herpes virus Simiae (CHV-1) and Simian immunodeficiency virus (SIVmac).

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 specifically 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 are 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 20 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 testosterone 6β-hydroxylase activity. Incubations are conducted at 0.4 mg/ml of S9 protein in 100 mM potassium phosphate, pH 7.4, 3.3 mM MgCl₂, and 200 µM testosterone as substrate for 5 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 Xenosensor Signaling in Drug-mediated Induction of Cytochromes P450. *J. Biol. Chem.*, **277**, 29561-29567 (2002).

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