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## Product Data Sheet

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Product Name: GSTT1 Human  
 Cat. No.: GP21758  
 Batch No.: 1

### Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Glutathione S-transferase theta-1; GST class-theta-1; Glutathione transferase T1-1; GSTT1.		
Amino Acid Sequence	MRGSHHHHHH GMASMTGGQQ MGRDLYDDDD KDRWGSHMGL ELYLDLLSQP CRAVYIFAKK NDIPFELRIV DLIKGQHLSD ACAQVNPLKK VPALKDGDFT LTESVAILLY LTRKYKVPDY WYPQDLQARA RVDEYLAWQH TTLRRSCLRA LWHKVMFPVF LGEPVSPQTL AATLAELDVT LQLLEDKFLQ NKAFLTGPHI SLADLVAITE LMHPVGAGCQ VFEGRPKLAT WRQRVEAAVG EDLFQEAHEV ILKAKDFPPA DPTIKQKLMP WVLAMIR.		
Formulation	The GSTT1 solution contains 20mM Tris-HCl buffer (pH 8.0) and 10% glycerol.		

### Introduction

GSTT1 belongs to a superfamily of proteins which catalyze the conjugation of reduced glutathione to a variety of electrophilic and hydrophobic compounds. GSTT1 is one of the GSTs in four main classes: alpha, mu, pi and theta (which includes GSTT1 and GSTT2). GSTT1 is involved in activation and detoxification reactions and catalyzes the conjugation of industrial chemicals, such as epoxybutane, ethylene oxides, halomethane with glutathione. GSTT1 is found in erythrocytes, at low levels in the liver as well as in Clara and ciliated cells at the alveolar/bronchiolar junction in the lung. The GSTT1 gene is deficient in 38% of the population. The GSTT1 enzyme deficiency might influence the individual risk for development of acquired aplastic anemia and acute myeloid leukemia. The presence or absence of the GSTT1 gene is concurrent with GSTT1+ (the conjugator) and GSTT1- (the non-conjugator) phenotypes correspondingly. The GSTT1+ phenotype is able to catalyze the glutathione conjugation of dichloromethane. GSTT1-null genotypes are seen as having a higher risk of developing leukoplakia. Germline genetic

**Caution: Product has not been fully validated for medical applications. For research use only.**

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polymorphism in GSTT1 is linked to breast cancer.

### Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

### Background

GSTT1 Human Recombinant fused with 37 amino acid His tag at N-terminus produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 277 amino acids (1-240 a.a.) and having a molecular mass of 31.5kDa. The GSTT1 is purified by proprietary chromatographic techniques.

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