

## GSTT1 Human

**Description:** 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.

Catalog #: ENPS-436

For research use only.

**Synonyms:** Glutathione S-transferase theta-1, GST class-theta-1, Glutathione transferase T1-1, GSTT1.

**Source:** Escherichia Coli.

**Physical Appearance:** Sterile Filtered colorless solution.

**Amino Acid Sequence:** MRGSHHHHHH GMASMTGGQQ MGRDLYDDDD KDRWGSHMGL  
ELYLDLLSQP CRAVYIFAKK NDIPFELRIV DLIKGQHLSD ACAQVNPLKK VPALKDGDFT  
LTVSVAALLY LTRKYKVPDY WYPQDLQARA RVDEYLAWQH TTLRRSCLRA LWHKVMFPVF  
LGEPVSPQTL AATLAELDVT LQLEDKFLQ NKAFLTGPHI SLADLVAITE LMHPVGAGCQ  
VFEGRPKLAT WR

**Purity:** Greater than 95.0% as determined by SDS-PAGE.

### Formulation:

The GSTT1 solution contains 20mM Tris-HCl buffer (pH 8.0) and 10% glycerol.

### 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.

### Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

### 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 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 polymorphism in GSTT1 is linked to breast cancer.

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