Data Sheet (Cat.No.TMPY-02223)

TargetMol

GSTM2 Protein, Human, Recombinant (His)

General Information

Synonyms:	GSTM2-2;GTHMUS;glutathione S-transferase mu 2 (muscle);GSTM;GST4
Protein Construction:	A DNA sequence encoding the native human GSTM2 (P28161) (Met 1-Lys 218) was expressed, with a polyhistide tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	P28161
Molecular Weight:	27.2 kDa (predicted); 27 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 97 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 50 mM Tris, 150 mM NaCl, 10 mM CaCl2, 0.05% Brig-35, pH 7.5. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Glutathione S-transferase Mu 2, also known as GST class-mu 2, GSTM2-2, and GSTM2, is a cytoplasm protein that belongs to the GST superfamily and Mu family. GSTM2 / GST4 contains one GST C-terminal domain and one GST N-terminal domain. The glutathione S-transferases (GSTs) are a multigene family of enzymes largely involved in the detoxification of chemicals. Eight distinct classes of the soluble cytoplasmic mammalian glutathione S-transferases have been identified: alpha, kappa, mu, omega, pi, sigma, theta, and zeta. Butyrate, an important

luminal component produced from the fermentation of dietary fibers, is an efficient inducer of GSTs and especially of GSTM2. Butyrate may act chemoprotective by increasing detoxification capabilities in the colon mucosa.

Reference

Campbell E, et al.,1990, J Biol Chem 265 (16): 9188-93.
Vorachek WR, et al.,1991, Proc Natl Acad Sci USA. 88 (10): 4443-7.
Ebert,M.N. et al., 2003, Carcinogenesis. 24 (10):1637-44.

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