Recombinant human Glutathione S-transferase alpha 4/GSTA4 protein

Catalog Number: ATGP3141

PRODUCT INFORMATION

Expression system
E.coli

Domain
1-222aa

UniProt No.
O15217

NCBI Accession No.
NP_001503

Alternative Names
Glutathione S-transferase alpha 4, GSTA4-4, GTA4

PRODUCT SPECIFICATION

Molecular Weight
28.3 kDa (246aa) confirmed by MALDI-TOF

Concentration
1mg/ml (determined by Bradford assay)

Formulation
Liquid in. 20mM Tris-HCl buffer (pH 8.0) 2mM DTT, 20% glycerol,100mM NaCl

Purity
> 95% by SDS-PAGE

Biological Activity
Specific activity is > 4,000pmol/min/ug, and is defined as the amount of enzyme that conjugate 1.0 u mole of 1-chloro-2,4-dinitrobenzene (CDNB) with reduced glutathione per minute at pH 6.5 at 25C.

Tag
His-Tag

Application
SDS-PAGE, Enzyme Activity

Storage Condition
Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

BACKGROUND

Description
GSTA4, also known as glutathione S-transferase A4, belongs to the GST superfamily. This enzyme is involved in cellular defense against toxic, carcinogenic, and pharmacologically active electrophilic compounds. GSTA4 shows very high activity with reactive carbonyl compounds such as alk-2-enals. GSTA4 is highly effective in

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catalyzing the conjugate addition of reduced glutathione to 4-hydroxynonenal, an important product of peroxidative degradation of arachidonic acid and a commonly used biomarker for oxidative damage in tissue. This enzyme is expressed at a high level in brain, placenta, and skeletal muscle and much lower in lung and liver. Recombinant human GSTA4 protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography techniques.

Amino acid Sequence

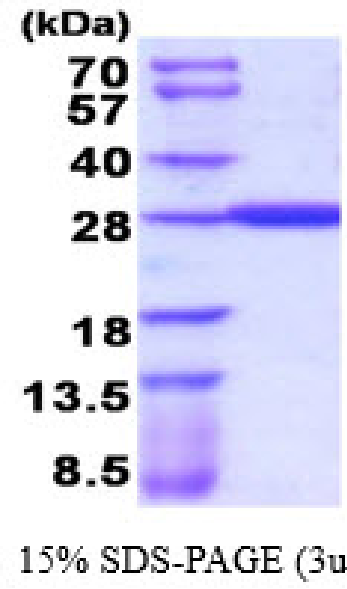
MGSSHHHHHH SSGLVPRGSH MGSHMAARPK LHYPNGRGRM ESVRWVLAAA GVEFDEEFLE TKEQLYKLQD GNHLLFQQVP MVEIDGMKLV QTRSILHYIA DKHNLFGKNL KERTLIDMYV EGTLDLLELL IMHPFLKPDD QQKEVVNMAQ KAIIRYFPVF EKILRGHGQS FLVGNQLSLA DVILLQTILA LEEKIPNILS AFPFLQEYTV KLSNIPTIKR FLEPGSKKKP PPDEIYVRTV YNIFRP

General References

Bruns C.M., et al. (1999) J. Mol. Biol. 288:427-439
Balogh L.M., et al. (2010) Biochemistry 49:1541-1548.

DATA

SDS-PAGE



15% SDS-PAGE (3ug)

3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.