Human Glutathione S-Transferase pi 1/GSTP1 Antibody

Antigen Affinity-purified Polyclonal Sheep IgG

Catalog Number: AF6455

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Glutathione S-Transferase pi 1/GSTP1 in direct ELISAs.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human Glutathione S-Transferase pi 1/GSTP1 Met1-Glu210 Accession # AAC51280
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

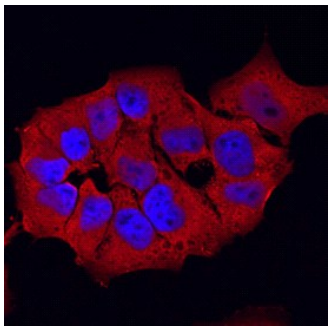
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Immunocytochemistry	5-15 µg/mL	See Below

DATA

Immunocytochemistry



Glutathione S-Transferase pi 1/GSTP1 in HeLa Human Cell Line.
Glutathione S-Transferase pi 1/GSTP1 was detected in immersion fixed HeLa human cervical epithelial carcinoma cell line using Sheep Anti-Human Glutathione S-Transferase pi 1/GSTP1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6455) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (red; Catalog # NL010) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Glutathione S-Transferases (GSTs) are members of the phase II detoxification enzyme family that conjugate glutathione to various electrophilic compounds, including metabolites generated by oxidative processes in the body, environmental toxins or carcinogens, and anti-cancer drugs. GSTP1 is a cytosolic protein that belongs to pi class of the GST superfamily. It is crystallized as a homodimer (1), but also exists in solution as an equilibrium mixture of monomer and dimer, depending on the protein concentration (2). Four genetic variants of GSTP1 with different enzymatic activities have been identified, which indicates the particular allelic form expressed in tissues could contribute to variation in catalytic efficiency and biological functions (3, 4). Human GSTP1 is present at elevated levels in many tumor cells, and has unique properties as a cancer marker (5). Genetic polymorphisms and expression patterns of GSTP1 have been associated with a variety of effects on human cancer, anti-cancer drug resistance, and asthma (6). In addition to its role as a drug-metabolizing enzyme, GSTP1 has ligand binding properties and regulates kinase signaling pathways through protein-protein interactions (7).

References:

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4. Hu, X. *et al.* (1998) Cancer Res. **58**:5340.
5. Sato, K. *et al.* (1992) Tohoku J. Exp. Med. **168**:97.
6. Townsend, D.M. and K.D. Tew (2003) Oncogene **22**:7369.
7. Adler, V. *et al.* (1999) EMBO J. **18**:1321.

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