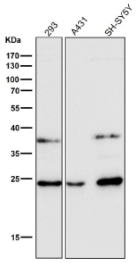
GSTA4 Antibody / Glutathione S-transferase alpha 4 [clone 31G31] (FY12149)

Catalog No.	Formulation	Size
FY12149	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA	100 ul

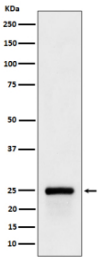
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	2-3 weeks
Species Reactivity	Human, Rat
Format	Liquid
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	31G31
Purity	Affinity-chromatography
Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
UniProt	O15217
Applications	Western Blot : 1:500-1:2000
Limitations	This GSTA4 antibody is available for research use only.



All lanes use the antibody at 1:1K dilution for 1 hour at room temperature.



Western blot analysis of GSTA4 expression in 293T cell lysate.

Description

GSTA4 antibody detects glutathione S-transferase alpha 4, an enzyme of the glutathione S-transferase (GST) family that catalyzes detoxification reactions. GSTA4 conjugates reduced glutathione to electrophilic compounds, facilitating their neutralization and removal. This enzyme shows strong activity against lipid peroxidation products such as 4-hydroxynonenal (4-HNE), protecting cells from oxidative stress damage.

Research using GSTA4 antibody has shown the enzyme's importance in maintaining cellular redox balance. GSTA4 is highly expressed in liver and kidney, where it contributes to detoxification of reactive aldehydes and xenobiotics. Deficiency or reduced activity of GSTA4 can increase susceptibility to oxidative stress, leading to tissue damage and metabolic imbalance. Conversely, elevated expression may provide protective effects against oxidative injury.

In disease contexts, GSTA4 has been linked to cancer, neurodegeneration, and cardiovascular disease. Cancer cells often reprogram GST expression to resist chemotherapy, and GSTA4 activity may contribute to drug resistance. In neurobiology, GSTA4's role in detoxifying lipid peroxidation products positions it as a protective factor against disorders involving oxidative stress, such as Alzheimer's and Parkinson's disease. Variations in GSTA4 expression have also been studied in diabetes and atherosclerosis.

Antibodies against GSTA4 are validated for western blot, immunohistochemistry, and immunofluorescence. These tools allow researchers to monitor enzyme expression, subcellular localization, and regulation under oxidative or toxic stress. Clone-based antibodies provide specificity to distinguish GSTA4 from other GST family members.

NSJ Bioreagents offers this GSTA4 antibody to support research in oxidative stress, detoxification, and disease biology.

Application Notes

Optimal dilution of the GSTA4 antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human GSTA4 was used as the immunogen for the GSTA4 antibody.

Storage

Store the GSTA4 antibody at -20oC.