GSTK1 Antibody / Glutathione S-transferase kappa 1 (FY13143)

Catalog No.	Formulation	Size
FY13143	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q9Y2Q3
Applications	Western Blot : 0.25-0.5ug/ml Immunohistochemistry : 2-5ug/ml Immunofluorescence : 5ug/ml Immunoprecipitation : 2-4ug/500ug of lysate Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This GSTK1 antibody is available for research use only.

Description

GSTK1 antibody detects Glutathione S-transferase kappa 1, a mitochondrial and peroxisomal enzyme that catalyzes the conjugation of glutathione to reactive electrophilic compounds for detoxification and redox regulation. The UniProt recommended name is Glutathione S-transferase kappa 1 (GSTK1). This enzyme belongs to the kappa class of glutathione S-transferases, distinct from the cytosolic and microsomal families by its localization and substrate specificity.

Functionally, GSTK1 antibody identifies a 226-amino-acid enzyme that forms homodimers with catalytic sites capable of binding glutathione and a broad range of electrophilic substrates. GSTK1 participates in lipid peroxidation repair, oxidative stress defense, and metabolic detoxification within mitochondria and peroxisomes. It also contributes to cellular protection against reactive oxygen species and lipid-derived aldehydes.

The GSTK1 gene is located on chromosome 7q34 and is expressed in liver, kidney, and adipose tissue, with additional expression in metabolically active organs. GSTK1 is involved in maintaining mitochondrial redox balance and may

influence energy metabolism and apoptotic signaling under oxidative stress conditions.

Pathologically, altered GSTK1 expression has been associated with obesity, diabetes, and cancer. Reduced GSTK1 levels compromise antioxidant defense, while overexpression may enhance cellular detoxification capacity. Research using GSTK1 antibody supports studies in oxidative stress, metabolism, and mitochondrial function.

GSTK1 antibody is validated for western blotting, immunohistochemistry, and enzyme assays to detect glutathione S-transferases in subcellular compartments. NSJ Bioreagents provides GSTK1 antibody reagents optimized for research in redox biology, metabolism, and cellular detoxification.

Structurally, Glutathione S-transferase kappa 1 contains a thioredoxin-like fold and a conserved GSH-binding domain typical of GSTs, but features unique peroxisomal targeting signals. This antibody enables detailed analysis of GSTK1Â’s enzymatic function and role in cellular defense mechanisms.

Application Notes

Optimal dilution of the GSTK1 antibody should be determined by the researcher.

Immunogen

E.coli-derived human GSTK1 recombinant protein (Position: N53-K213) was used as the immunogen for the GSTK1 antibody.

Storage

After reconstitution, the GSTK1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.