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Rabbit Anti-Glutathione Synthetase/AF350 Conjugated antibody

SL11850R-AF350

Product Name	Anti-Glutathione Synthetase/AF350
Chinese Name	AF350 标记的谷胱甘肽合成酶抗体
Alias	Glutathione synthase; GSH S; GSH synthetase; GSH-S; GSHB_HUMAN; GSHS; GSS; MGC14098; OTTHUMP00000030711.
Research Area	Tumour Cell biology Neurobiology Signal transduction The new supersedes the old
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Human,Mouse,Rat(predicted:Dog,Pig,Cow,Horse,Sheep)
Applications	IF=1:100-500 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight	52kDa
Form	Lyophilized or Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human Glutathione Synthetase
Lsotype	IgG
Purification	affinity purified by Protein A
Storage Buffer	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 1M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
Product Detail	**background:** GSS (Glutathione synthetase) is a 474 amino acid protein encoded by the gene located at human chromosome 20q11.2. GSS consists of three loops projecting from an antiparallel ∫-sheet, a parallel ∫-sheet and a lid of anti-parallel sheets,

which provide access to the ATP-binding site. Although Southern blot and gene analysis suggest that GSS may be the only member of a unique family, the crystal structure indicates that GSS belongs to the ATP-GRASP superfamily. GSS is expressed in hemocytes and nucleated cells, including the brain. GSS occurs as a homodimer. There are two steps in the production of Glutathione, begining with GSS (Glutathione synthetase) is a 474 amino acid protein encoded by the gene located at human chromosome 20q11.2. GSS consists of three loops projecting from an antiparallel ∫-sheet, a parallel ∫-sheet and a lid of anti-parallel sheets, which provide access to the ATP-binding site. Although Southern blot and gene analysis suggest that GSS may be the only member of a unique family, the crystal structure indicates that GSS belongs to the ATP-GRASP superfamily. GSS is expressed in hemocytes and nucleated cells, including the brain. GSS occurs as a homodimer. There are two steps in the production of Glutathione, begining with ©-GCS and ending with GSS. In an ATP-dependent reaction, GSS produces Glutathione from ©-glutamylcysteine and glycine precursors. Partial hepatectomy, diethyl maleate, buthionine sulfoximine, tert-butylhaydroquinone and thioacetamide increase the ex-pression of GSS, which causes an increase in Glutathione levels. An inherited autosomal recessive disorder, 5-oxoprolinuria (pyroglutamic aciduria), is caused by GSS deficiencies, which leads to central nervous system damage, hemolytic anemia, metabolic acidosis and urinary excretion of 5-oxoproline. A missense mutation in the gene encoding GSS leads to a GSS deficiency restricted to erythrocytes, which causes only hemolytic anemia.-GCS and ending with GSS. In an ATP-dependent reaction, GSS produces Glutathione from ©-glutamylcysteine and glycine precursors. Partial hepatectomy, diethyl maleate, buthionine sulfoximine, tert-butylhaydroquinone and thioacetamide increase the ex-pression of GSS, which causes an increase in Glutathione levels. An inherited autosomal recessive disorder, 5-oxoprolinuria (pyroglutamic aciduria), is caused by GSS deficiencies, which leads to central nervous system damage, hemolytic anemia, metabolic acidosis and urinary excretion of 5-oxoproline. A missense mutation in the gene encoding GSS leads to a GSS deficiency restricted to erythrocytes, which causes only hemolytic anemia.

Function:
Sulfur metabolism; glutathione biosynthesis; glutathione from L-cysteine and L-glutamate: step 2/2.

Subunit:
Homodimer.

DISEASE:
Defects in GSS are the cause of glutathione synthetase deficiency (GSS deficiency) [MIM:266130]; also known as 5-oxoprolinuria or pyroglutamic

aciduria. It is a severe form characterized by an increased rate of hemolysis and defective function of the central nervous system.
Defects in GSS are the cause of glutathione synthetase deficiency of erythrocytes (GLUSYNDE)[MIM:231900]. Glutathione synthetase deficiency of erythrocytes is a mild form causing hemolytic anemia.

Similarity:
Belongs to the eukaryotic GSH synthase family.

Database links:

Entrez Gene: 2937 Human

Entrez Gene: 14854 Mouse

Entrez Gene: 25458 Rat

Omim: 601002 Human

SwissProt: P48637 Human

SwissProt: P51855 Mouse

SwissProt: P46413 Rat

Unigene: 82327 Human

Unigene: 252316 Mouse

Unigene: 1692 Rat

Important Note:
This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.