SANTA CRUZ BIOTECHNOLOGY, INC.

GGTL3 (A-12): sc-86139

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Glutathione is a tripeptide electron donor that functions as an antioxidant, protecting cells from toxins by reducing disulfide bonds during oxidative stress. The metabolism of glutathione requires a variety of enzymes, such as GGT1, GGT2, GGT5, GGTLC2 and GGTL3. GGTL3, also known as GGT7 (γ-glutamyltransferase 7), GGT4 or GGTL5, is a 662 amino acid single-pass type II membrane protein that belongs to the γ-glutamyltransferase family and is involved in the pathway of Glutathione metabolism. Expressed at low levels in multiple tissues, including lung, liver, heart, brain, testis and spleen, GGTL3 functions as a heterodimer of light and heavy chains that work together to cleave Glutathione-conjugated peptides, thereby releasing an unconjugated protein. GGTL3 exists as multiple alternatively spliced isoforms and, via its catalytic activity, may be involved in the pathogenesis of lung cancer.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: GGT7 (human) mapping to 20q11.22; Ggt7 (mouse) mapping to 2 H1.

SOURCE

GGTL3 (A-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an extracellular domain of GGTL3 of human origin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-86139 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GGTL3 (A-12) is recommended for detection of GGTL3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with GGTL3-2, GGTL3-B, or GGTL3-4.

GGTL3 (A-12) is also recommended for detection of GGTL3 in additional species, including equine and canine.

Suitable for use as control antibody for GGTL3 siRNA (h): sc-75129, GGTL3 siRNA (m): sc-145393, GGTL3 shRNA Plasmid (h): sc-75129-SH, GGTL3 shRNA Plasmid (m): sc-145393-SH, GGTL3 shRNA (h) Lentiviral Particles: sc-75129-V and GGTL3 shRNA (m) Lentiviral Particles: sc-145393-V.

Molecular Weight of GGTL3: 70 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.