SANTA CRUZ BIOTECHNOLOGY, INC.

Selenoprotein O (A-16): sc-86221

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Selenium is an essential trace element that is incorporated as selenocysteine into the primary structure of selenoproteins. Nutritional deficiency of selenium decreases selenoprotein concentrations and leads to pathologic conditions. Most of the known selenoproteins are members of the glutathione peroxidase or iodothyronine deiodinase families. Selenoprotein O, also known as SELO, is a 669 amino acid globular protein that belongs to the UPF0061 (SELO) family and contains a selenocysteine (Sec) residue at its active site. Expressed in a variety of tissues, Selenoprotein O is encoded by the UGA codon that typically signals translation termination, mapping to human chromosome 22. Chromosome 22 houses over 500 genes and is the second smallest human chromosome. Mutations in several of the genes that map to chromosome 22 are involved in the development of Phelan-McDermid syndrome, Neurofibromatosis type 2, autism and schizophrenia.

REFERENCES

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STORAGE

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

CHROMOSOMAL LOCATION

Genetic locus: RP3-402G11.5 (human) mapping to 22q13.33; 1300018J18Rik (mouse) mapping to 15 E3.

SOURCE

Selenoprotein O (A-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Selenoprotein O of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-86221 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Selenoprotein O (A-16) is recommended for detection of Selenoprotein O of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 other selenoprotein family members.

Suitable for use as control antibody for Selenoprotein O siRNA (h): sc-76471, Selenoprotein O siRNA (m): sc-153328, Selenoprotein O shRNA Plasmid (h): sc-76471-SH, Selenoprotein O shRNA Plasmid (m): sc-153328-SH, Selenoprotein O shRNA (h) Lentiviral Particles: sc-76471-V and Selenoprotein O shRNA (m) Lentiviral Particles: sc-153328-V.

Molecular Weight of Selenoprotein O: 74 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (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.