SANTA CRUZ BIOTECHNOLOGY, INC.

USP53 (Y-15): sc-103930

BACKGROUND

The ubiquitin (Ub) pathway involves three sequential enzymatic steps that facilitate the conjugation of Ub and Ub-like molecules to specific protein substrates. Through the use of a wide range of enzymes that can add or remove ubiquitin, the Ub pathway controls many intracellular processes such as signal transduction, transcriptional activation and cell cycle progression. USP53 (ubiquitin specific peptidase 53) is a 1,073 amino acid protein that belongs to the peptidase C19 family and is expressed predominately in heart and skeletal muscle. Unlike other mammalian proteases, USP53 lacks functional active sites that are required for catalytic activity, thereby rendering USP53 inactive. The gene encoding USP53 maps to human chromosome 4, which encodes nearly 6% of the human genome and has the largest gene deserts (regions of the genome with no protein encoding genes) of all of the human chromosomes.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: USP53 (human) mapping to 4q26; Usp53 (mouse) mapping to 3 G1.

SOURCE

USP53 (Y-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of USP53 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-103930 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

USP53 (Y-15) is recommended for detection of USP53 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 USP family members.

Suitable for use as control antibody for USP53 siRNA (h): sc-89260, USP53 siRNA (m): sc-106683, USP53 shRNA Plasmid (h): sc-89260-SH, USP53 shRNA Plasmid (m): sc-106683-SH, USP53 shRNA (h) Lentiviral Particles: sc-89260-V and USP53 shRNA (m) Lentiviral Particles: sc-106683-V.

Molecular Weight of USP53: 121 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.