SANTA CRUZ BIOTECHNOLOGY, INC.

SPP24 (D-14): sc-169409

BACKGROUND

SPP24 (secreted phosphoprotein 24), also known as secreted phosphoprotein 2, is a 211 amino acid secreted protein that belongs to the cystatin superfamily. Expressed in liver and plasma, SPP24 may play a role in coordinating an aspect of bone turnover. The gene that encodes SPP24 maps to human chromosome 2, which consists of 237 million bases encoding over 1,400 genes, making up approximately 8% of the human genome. A number of genetic diseases are linked to genes on chromosome 2. Harlequin icthyosis, a rare and morbid skin deformity, is associated with mutations in the ABCA12 gene. The lipid metabolic disorder sitosterolemia is associated with ABCG5 and ABCG8. An extremely rare recessive genetic disorder, Alström syndrome is due to mutations in the ALMS1 gene. Interestingly, chromosome 2 contains what appears to be a vestigial second centromere and vestigial telomeres which gives credence to the hypothesis that human chromosome 2 is the result of an ancient fusion of two ancestral chromosomes seen in modern form today in apes.

REFERENCES

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3. Bennett, C.S., et al. 2004. Characterization of the human secreted phosphoprotein 24 gene (SPP2) and comparison of the protein sequence in nine species. Matrix Biol. 22: 641-651.
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5. Thomas, A.C., et al. 2006. ABCA12 is the major harlequin ichthyosis gene. J. Invest. Dermatol. 126: 2408-2413.
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9. Brochmann, E.J., et al. 2009. Bone morphogenetic protein-2 activity is regulated by secreted phosphoprotein-24 kd, an extracellular pseudoreceptor, the gene for which maps to a region of the human genome important for bone quality. Metab. Clin. Exp. 58: 644-650.

CHROMOSOMAL LOCATION

Genetic locus: SPP2 (human) mapping to 2q37.1.

STORAGE

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

SOURCE

SPP24 (D-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SPP24 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-169409 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SPP24 (D-14) is recommended for detection of SPP24 of 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 SPP .

Suitable for use as control antibody for SPP24 siRNA (h): sc-94679, SPP24 shRNA Plasmid (h): sc-94679-SH and SPP24 shRNA (h) Lentiviral Particles: sc-94679-V.

Molecular Weight of SPP24: 24 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.