SANTA CRUZ BIOTECHNOLOGY, INC.

AP5Z1 (C-15): sc-139260

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The Power to Question

BACKGROUND

AP5Z1 (adaptor-related protein complex 5, ζ 1 subunit), also known as SPG48 or KIAA0415, is an 807 amino acid protein that localizes to both the cytoplasm and nucleus. AP5Z1 may be a helicase that is necessary for homologous recombination DNA double-strand break repair. AP5Z1 is likely part of the adaptor protein complex five (AP-5) with AP5B1, AP5M1, and AP5S1. AP5Z1 also interacts with ZFVE26 and SPG11. Defects in AP5Z1 cause spastic paraplegia autosomal recessive type 48. Spastic paraplegia is a neurodegenerative disease that is characterized by progressive weakness and spasticity of the lower body. The progression and severity of symptoms are variable. Spastic paraplegia begins with difficulty of balance, stiffness and weakness in the legs, muscular spasms and dragging of the toes. Incontinence may appear as well as weakness or stiffness of other body parts. KIAA0415 exists as three alternatively spliced isoforms and maps to human chromosome 7.

REFERENCES

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2. Wistow, G., et al. 2002. Expressed sequence tag analysis of adult human iris for the NEIBank project: steroid-response factors and similarities with retinal pigment epithelium. Mol. Vis. 8: 185-195.
3. Słabicki, M., et al. 2010. A genome-scale DNA repair RNAi screen identifies SPG48 as a novel gene associated with hereditary spastic paraplegia. PLoS Biol. 8: e1000408.
4. Hirst, J., et al. 2011. The fifth adaptor protein complex. PLoS Biol. 9: e1001170.
5. Finsterer, J., et al. 2012. Hereditary spastic paraplegias with autosomal dominant, recessive, X-linked, or maternal trait of inheritance. J. Neurol. Sci. 318: 1-18.
6. Fink, J.K. 2013. Hereditary spastic paraplegia: clinico-pathologic features and emerging molecular mechanisms. Acta Neuropathol. 126: 307-328.
7. Pensato, V., et al. 2014. Overlapping phenotypes in complex spastic paraplegias SPG11, SPG15, SPG35 and SPG48. Brain 137: 1907-1920.

CHROMOSOMAL LOCATION

Genetic locus: AP5Z1 (human) mapping to 7p22.1; Ap5z1 (mouse) mapping to 5 G2.

SOURCE

AP5Z1 (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of AP5Z1 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-139260 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

AP5Z1 (C-15) is recommended for detection of AP5Z1 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).

Suitable for use as control antibody for AP5Z1 siRNA (h): sc-89435, AP5Z1 siRNA (m): sc-141897, AP5Z1 shRNA Plasmid (h): sc-89435-SH, AP5Z1 shRNA Plasmid (m): sc-141897-SH, AP5Z1 shRNA (h) Lentiviral Particles: sc-89435-V and AP5Z1 shRNA (m) Lentiviral Particles: sc-141897-V.

Molecular Weight of AP5Z1: 89 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.

STORAGE

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

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.