SANTA CRUZ BIOTECHNOLOGY, INC.

AKD1 (N-13): sc-138833

BACKGROUND

AKD1 (adenylate kinase domain containing 1), also known as AKD2 (adenylate kinase domain containing 2), is a 1,911 amino acid coiled-coil protein belonging to the adenylate kinase family. AKD1 exists as six alternatively spliced isoforms and is encoded by a gene that maps to human chromosome 6q21. Chromosome 6 makes up nearly 6% of the human genome and contains 170 million base pairs, which encode 1,200 genes. Deletion of a portion of the q arm of chromosome 6 is associated with early onset intestinal cancer, suggesting the presence of a cancer susceptibility locus. A bipolar disorder susceptibility locus is also linked to the q arm of chromosome 6. The PARK2 gene, which is associated with Parkinson's disease, and the genes encoding the major histocompatiblity complex proteins are located on chromosome 6. Stickler syndrome, 21-hydroxylase deficiency and maple syrup urine disease are also associated with genes on chromosome 6.

REFERENCES

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3. McQueen, M.B., et al. 2005. Combined analysis from eleven linkage studies of bipolar disorder provides strong evidence of susceptibility loci on chromosomes 6q and 8q. Am. J. Hum. Genet. 77: 582-595.

4. Liu, W., et al. 2006. Comprehensive assessment of DNA copy number alterations in human prostate cancers using Affymetrix 100K SNP mapping array. Genes Chromosomes Cancer 45: 1018-1032.

5. Safadi, S.S., et al. 2007. A disease state mutation unfolds the parkin ubiquitin-like domain. Biochemistry 46: 14162-14169.

6. Park, E., et al. 2007. Modulation of parkin gene expression in noradrenergic neuronal cells. Int. J. Dev. Neurosci. 25: 491-497.

7. Bläker, H., et al. 2008. Recurrent deletions at 6q in early age of onset non-HNPCC- and non-FAP-associated intestinal carcinomas. Evidence for a novel cancer susceptibility locus at 6q14-q22. Genes Chromosomes Cancer 47: 159-164.

CHROMOSOMAL LOCATION

Genetic locus: AKD1 (human) mapping to 6q21.

SOURCE

AKD1 (N-13) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of AKD1 of human origin.

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-138833 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

AKD1 (N-13) is recommended for detection of AKD1 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for AKD1 siRNA (h): sc-95233, AKD1 shRNA Plasmid (h): sc-95233-SH and AKD1 shRNA (h) Lentiviral Particles: sc-95233-V.

Molecular Weight of AKD1: 221 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) 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.

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.