

ANKRD40 (E-19): sc-244947

BACKGROUND

Ankyrins are membrane adaptor molecules that play important roles in coupling integral membrane proteins to the spectrin-based cytoskeleton network. Mutations of ankyrin genes lead to severe genetic diseases, such as fatal cardiac arrhythmias and hereditary spherocytosis. ANKRD40 (ankyrin repeat domain 40) is a 368 amino acid protein that contains 2 ANK repeats. Conserved in chimpanzee, canine, bovine, mouse, rat, chicken and zebrafish, ANKRD40 may play a role in cell adhesion and migration. ANKRD40 is encoded by a gene that maps to human chromosome 17q21.33. Chromosome 17 makes up over 2.5% of the human genome and contains about 81 million bases, which encode over 1,200 genes. Chromosome 17 is linked to neurofibromatosis, a condition characterized by neural and epidermal lesions and dysregulated Schwann cell growth. Alexander disease, Birt-Hogg-Dube syndrome and Canavan disease are also associated with chromosome 17.

REFERENCES

1. Welsch, M.J., Kronic, A. and Medenica, M.M. 2005. Birt-Hogg-Dube Syndrome. *Int. J. Dermatol.* 44: 668-673.
2. Al-Dirbashi, O.Y., Rashed, M.S., Al-Qahtani, K., Al-Mokhadab, M.A., Kurdi, W. and Al-Sayed, M.A. 2007. Quantification of N-acetylaspartic acid in urine by LC-MS/MS for the diagnosis of Canavan disease. *J. Inher. Metab. Dis.* 30: 612.
3. Murakami, N., Tsuchiya, T., Kanazawa, N., Tsujino, S. and Nagai, T. 2008. Novel deletion mutation in GFAP gene in an infantile form of Alexander disease. *Pediatr. Neurol.* 38: 50-52.
4. Ernst, W.L., Zhang, Y., Yoo, J.W., Ernst, S.J. and Noebels, J.L. 2009. Genetic enhancement of thalamocortical network activity by elevating alpha 1g-mediated low-voltage-activated calcium current induces pure absence epilepsy. *J. Neurosci.* 29: 1615-1625.
5. Tan, M.G., Chua, W.T., Esiri, M.M., Smith, A.D., Vinters, H.V. and Lai, M.K. 2010. Genome wide profiling of altered gene expression in the neocortex of Alzheimer's disease. *J. Neurosci. Res.* 88: 1157-1169.
6. Aarhus, M., Bruland, O., Sætran, H.A., Mork, S.J., Lund-Johansen, M. and Knappskog, P.M. 2010. Global gene expression profiling and tissue microarray reveal novel candidate genes and down-regulation of the tumor suppressor gene CAV1 in sporadic vestibular schwannomas. *Neurosurgery* 67: 998-1019; discussion 1019.
7. Ray, A., Liu, J., Ayoubi, P. and Pope, C. 2010. Dose-related gene expression changes in forebrain following acute, low-level chlorpyrifos exposure in neonatal rats. *Toxicol. Appl. Pharmacol.* 248: 144-155.
8. SWISS-PROT/TrEMBL (Q6AI12). World Wide Web URL: <http://www.uniprot.org/uniprot/Q6AI12>

CHROMOSOMAL LOCATION

Genetic locus: ANKRD40 (human) mapping to 17q21.33; Ankrd40 (mouse) mapping to 11 D.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

SOURCE

ANKRD40 (E-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ANKRD40 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-244947 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ANKRD40 (E-19) is recommended for detection of ANKRD40 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 ANKRD family members.

ANKRD40 (E-19) is also recommended for detection of ANKRD40 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for ANKRD40 siRNA (h): sc-94052, ANKRD40 siRNA (m): sc-141099, ANKRD40 shRNA Plasmid (h): sc-94052-SH, ANKRD40 shRNA Plasmid (m): sc-141099-SH, ANKRD40 shRNA (h) Lentiviral Particles: sc-94052-V and ANKRD40 shRNA (m) Lentiviral Particles: sc-141099-V.

Molecular Weight of ANKRD40: 41 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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.