



Ankyrin G (h2): 293T Lysate: sc-176843

BACKGROUND

Members of the Ankyrin family of proteins >mediate the attachment of integral membrane proteins to the cytoskeleton. ANK1, ANK2 and ANK3 genes encode for the proteins in this family, Ankyrin-1 (also designated Ankyrin R), Ankyrin B and Ankyrin G, respectively. The proteins are structured similarly, each composed of an N-terminal domain with multiple Ankyrin repeats, a highly conserved central spectrin binding domain and C-terminal regulatory domains which are susceptible to the most variance. >Both Ankyrin B and Ankyrin G are essential for normal neuronal functions. >Ankyrin G was originally identified localized to the nodes of Ranvier and axon initial segments where it was found to mediate normal neuronal sodium channel function. Ankyrin G, named for its giant size and general expression, exhibits tissue-specific alternative mRNA processing. The two largest protein isoforms are expressed only in nervous tissue, with additional smaller isoforms found in an array of other tissues including lung, kidney, spleen, liver and heart.

REFERENCES

1. Kordeli, E., et al. 1995. Ankyrin G. A new ankyrin gene with neural-specific isoforms localized at the axonal initial segment and node of Ranvier. *J. Biol. Chem.* 270: 2352-2359.
2. Zhang, X., et al. 1998. Restriction of 480/270-kD Ankyrin G to axon proximal segments requires multiple ankyrin G-specific domains. *J. Cell Biol.* 142: 1571-1581.
3. Bennett, V., et al. 1999. Physiological roles of axonal ankyrins in survival of premyelinated axons and localization of voltage-gated sodium channels. *J. Neurocytol.* 28: 303-318.
4. Bongenhielm, U., et al. 2000. Expression of sodium channel SNS/PN3 and Ankyrin G mRNAs in the trigeminal ganglion after inferior alveolar nerve injury in the rat. *Exp. Neurol.* 164: 384-395.
5. Hryniewicz-Jankowska, A., et al. 2002. Ankyrins, multifunctional proteins involved in many cellular pathways. *Folia Histochem. Cytobiol.* 40: 239-249.
6. Kretschmer, T., et al. 2002. Painful neuromas: a potential role for a structural transmembrane protein, ankyrin G. *J. Neurosurg.* 97: 1424-1431.

CHROMOSOMAL LOCATION

Genetic locus: ANK3 (human) mapping to 10q21.2.

PRODUCT

Ankyrin G (h2): 293T Lysate represents a lysate of human Ankyrin G transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

APPLICATIONS

Ankyrin G (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive Ankyrin G antibodies.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RESEARCH USE

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