



Ankyrin G (3G8): sc-70359

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

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CHROMOSOMAL LOCATION

Genetic locus: ANK3 (human) mapping to 10q21.2; Ank3 (mouse) mapping to 10 B5.3.

SOURCE

Ankyrin G (3G8) is a mouse monoclonal antibody raised against a synthetic peptide derived from the spectrin-binding domain of Ankyrin G human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Ankyrin G (3G8) is recommended for detection of Ankyrin G of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Ankyrin G (3G8) is also recommended for detection of Ankyrin G in additional species, including canine.

Suitable for use as control antibody for Ankyrin G siRNA (h): sc-43263, Ankyrin G siRNA (m): sc-43268, Ankyrin G shRNA Plasmid (h): sc-43263-SH, Ankyrin G shRNA Plasmid (m): sc-43268-SH, Ankyrin G shRNA (h) Lentiviral Particles: sc-43263-V and Ankyrin G shRNA (m) Lentiviral Particles: sc-43268-V.

Molecular Weight of brain-specific Ankyrin G isoforms: 480/270 kDa.

Molecular Weight of other Ankyrin G isoforms: 50-190 kDa.

Positive Controls: Caco-2 cell lysate: sc-2262, IMR-32 cell lysate: sc-2409 or rat brain extract: sc-2392.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

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 for detailed protocols and support products.



See **Ankyrin G (463): sc-12719** for Ankyrin G antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.