

α -chimaerin (L-13): sc-79824

BACKGROUND

The Rac-GAP chimaerin family member α -chimaerin (also known as N-chimaerin or Rho GTPase-activating protein 2) has two splice variants: α 1 and α 2. The α 1-chimaerin variant is a neuron-specific, diacylglycerol-binding and GTPase-activating protein for Ras-related protein Rac 1. This variant lacks the N-terminal SH2 domain that is present in the α 2 variant. By inactivating Rac 1, α 1-chimaerin plays a significant role in the regulation of dendritic growth during neuronal development. It is recruited to the plasma membrane by phospholipase C β -coupled cell surface receptors activating the downstream generation of DAG (diacylglycerol). Overexpression of α 1-chimaerin results in dendritic spine retraction and the loss of dendritic branches. In the presence of reduced neuronal activity, α 1-chimaerin expression is down-regulated resulting in an increase in spine growth and dendritic branching.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: CHN1 (human) mapping to 2q31.1; Chn1 (mouse) mapping to 2 C3.

SOURCE

α -chimaerin (L-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of α -chimaerin of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-79824 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

α -chimaerin (L-13) is recommended for detection of α 1 and α 2 isoforms of α -chimaerin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], 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).

α -chimaerin (L-13) is also recommended for detection of α 1 and α 2 isoforms of α -chimaerin in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for α -chimaerin siRNA (h): sc-72412, α -chimaerin siRNA (m): sc-72413, α -chimaerin shRNA Plasmid (h): sc-72412-SH, α -chimaerin shRNA Plasmid (m): sc-72413-SH, α -chimaerin shRNA (h) Lentiviral Particles: sc-72412-V and α -chimaerin shRNA (m) Lentiviral Particles: sc-72413-V.

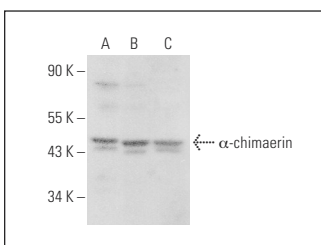
Molecular Weight of α -chimaerin: 38 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HEK293 whole cell lysate: sc-45136 or MCF7 whole cell lysate: sc-2206.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



α -chimaerin (L-13): sc-79824. Western blot analysis of α -chimaerin expression in MCF7 (A), HeLa (B) and HEK293 (C) whole cell lysates.

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.