Arc (C-7): sc-17839

**BACKGROUND**

Growth factor stimulation has been shown to induce the expression of immediate early genes in non-neuronal cells, which encode a variety of molecules that are potentially involved in long-term cellular responses. Similar responses induced by neurotransmitter stimulation have also been seen in neuronal cells and evidence suggests that protein synthesis is required for long-term synaptic plasticity. Arc (for activity-regulated cytoskeleton-associated protein) is a growth factor and immediate early gene that is enriched in brain. Arc mRNA and protein levels are induced by neuronal activity, which is necessary to stimulate neuroplasticity, indicating a potential role for Arc in activity-dependent changes in dendrite function. Arc expression has been detected in neuronal cell bodies and dendrites in the hippocampus, amygdala, hypothalamus, striatum and cortex. Arc has been shown to localize to the cytoskeleton of neuronal cells and appears to co-localize with F-Actin, although it may associate with an Actin-associated protein rather than directly with F-Actin. It has been shown that cocaine-stimulated neuronal activity results in increased Arc mRNA levels in striatum.

**CHROMOSOMAL LOCATION**

Genetic locus: ARC (human) mapping to 8q24.3; Arc (mouse) mapping to 15 D3.

**SOURCE**

Arc (C-7) is a mouse monoclonal antibody raised against amino acids 1-300 of Arc (activity regulated cytoskeleton associated protein) of human origin.

**PRODUCT**

Each vial contains 200 μg IgG2a kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Arc (C-7) is available conjugated to agarose (sc-17839 AC), 500 μg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-17839 HRP), 200 μg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-17839 PE), fluorescein (sc-17839 FITC), Alexa Fluor® 488 (sc-17839 AF488), Alexa Fluor® 546 (sc-17839 AF546), Alexa Fluor® 594 (sc-17839 AF594) or Alexa Fluor® 647 (sc-17839 AF647), 200 μg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-17839 AF680) or Alexa Fluor® 790 (sc-17839 AF790), 200 μg/ml, for Near-Infrared (NIR) WB, IF and FCM.

**APPLICATIONS**

Arc (C-7) is recommended for detection of ARC of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:500), immunoprecipitation [1-2 μg per 100-500 μg 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).

Suitable for use as control antibody for Arc siRNA (h): sc-29721, Arc siRNA (m): sc-29724, Arc shRNA Plasmid (h): sc-29721-SH, Arc shRNA Plasmid (m): sc-29724-SH, Arc shRNA (h) Lentiviral Particles: sc-29721-V and Arc shRNA (m) Lentiviral Particles: sc-29724-V.

Molecular Weight of Arc: 55 kDa.

**STORAGE**

Store at 4°C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**DATA**

![Western blot analysis of Arc](image)

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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

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