Technical Data Sheet

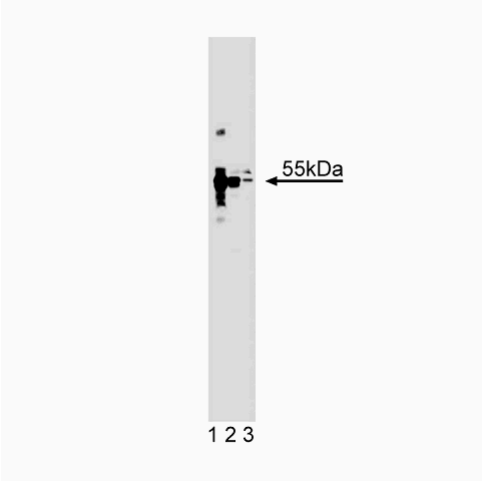
Purified Mouse Anti-Arc

Product Information

Material Number:	**612603**
Alternate Name:	Activity-Regulated Cytoskeleton-associated protein
Size:	150 µg
Concentration:	250 µg/ml
Clone:	40/Arc
Immunogen:	Rat Arc aa. 264-385
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Rat Tested in Development: Mouse, Human
Target MW:	55 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Immediate early genes (IEGs) are the first to be transcribed upon cellular stimulation. Two groups of these genes have been characterized: those which encode transcription factors that indirectly influence cellular activity, and those which encode effector proteins that directly affect cellular activity. *Arc* (Activity-Regulated Cytoskeleton-associated protein) encodes an effector protein associated with the actin cytoskeletal matrix. In activated neurons of the hippocampus, Arc gene expression is rapidly induced. Arc protein is concentrated in the actin cortex, adjacent to the plasma membrane of the cell body and dendrites. Arc has a putative role in the maintenance of neuronal plasticity and in activity-dependent changes in dendrite function. Cocaine and D2 receptor antagonists are known to trigger the production and localization of Arc to dendrites and neuronal cell bodies.



Western blot analysis of Arc on a rat cerebrum lysate. *Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of the mouse anti-Arc antibody.*

Preparation and Storage

Store undiluted at -20° C.
The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Application Notes

Application

Western blot	Routinely Tested

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml

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Suggested Companion Products

Catalog Number	Name	Size	Clone
611463	Rat Cerebrum Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Lyford GL, Yamagata K, Kaufmann WE. Arc, a growth factor and activity-regulated gene, encodes a novel cytoskeleton-associated protein that is enriched in neuronal dendrites. *Neuron.* 1995; 14(2):433-445.(Biology)

Vazdarjanova A, McNaughton BL, Barnes CA. Experience-dependent coincident expression of the effector immediate-early genes arc and Homer 1a in hippocampal and neocortical neuronal networks. *J Neurosci.* 2002; 22(23):10067-10071.(Biology)