GAP-43 (7B10): sc-33705

**BACKGROUND**

GAP-43 (growth associated protein 43, B-50, PP46, calmodulin-binding protein P-57, neuronomulin, neuron growth-associated protein 43, protein F1) is a crucial component for regenerative response in the nervous system that is present at high levels in neuronal growth cones during development and axonal regeneration. GAP-43 is normally produced by neurons during developmental growth and axonal regeneration, but it is also expressed in specific regions of the normal adult nervous system. The neuron-specific Elav/Hu family member, HuD, interacts with and stabilizes GAP-43 mRNA in developing neurons and leads to increased levels of GAP-43 protein. Heterozygous GAP-43 knockout mice with GAP-43 levels reduced by one-half display significant memory impairments in cued conditioning or on tests of nociceptive or auditory perception.

**CHROMOSOMAL LOCATION**

Genetic locus: GAP43 (human) mapping to 3q13.31; Gap43 (mouse) mapping to 16 B4.

**SOURCE**

GAP-43 (7B10) is a mouse monoclonal antibody raised against full length GAP-43 of rat origin.

**PRODUCT**

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

GAP-43 (7B10) is available conjugated to agarose (sc-33705 AC), 500 μg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-33705 HRP), 200 μg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-33705 PE), fluorescein (sc-33705 FITC), Alexa Fluor® 488 (sc-33705 AF488), Alexa Fluor® 546 (sc-33705 AF546), Alexa Fluor® 594 (sc-33705 AF594) or Alexa Fluor® 647 (sc-33705 AF647), 200 μg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-33705 AF680) or Alexa Fluor® 790 (sc-33705 AF790), 200 μg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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**APPLICATIONS**

GAP-43 (7B10) is recommended for detection of axonal membrane protein GAP-43 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).


Molecular Weight of GAP-43: 43 kDa.


**STORAGE**

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

**DATA**

GAP-43 (7B10), sc-33705. Western blot analysis of GAP-43 expression in human brain (A), mouse cerebellum (B), mouse spinal cord (C), rat brain (D), rat cerebellum (E) and rat spinal cord (F) tissue extracts. Detection reagent used: m-IgG Fc HRP: sc-25409.

GAP-43 (7B10), sc-33705. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex (A) and mouse brain (B) tissue showing neuropil staining.

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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