



# SZABO SCANDIC

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Diagnostik & molekulare Diagnostik



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### Zuschläge

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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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# GAP-43 (h4): 293T Lysate: sc-175907

## BACKGROUND

GAP-43 (growth associated protein 43, B-50, PP46, calmodulin-binding protein P-57, neuromodulin, 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.

## REFERENCES

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2. Neve, R.L., et al. 1998. The neuronal growth-associated protein GAP-43 interacts with RABAPTIN-5 and participates in endocytosis. *J. Neurosci.* 18: 7757-7767.
3. Arni, S., et al. 1998. Association of GAP-43 with detergent-resisting membranes requires two palmitoylated cysteine residues. *J. Biol. Chem.* 273: 28478-28485.
4. Sretavan, D.W., et al. 1998. Randomized retinal ganglion cell axon routing at the optic chiasm of GAP-43 deficient mice: association with midline recrossing and lack of normal ipsilateral axon turning. *J. Neurosci.* 18: 10502-10513.
5. Dent, E.W., et al. 1998. Distribution of phosphorylated GAP-43 (neuromodulin) in growth cones directly reflects growth cone behavior. *J. Neurobiol.* 35: 287-299.
6. Velasco, A., et al. 2003. Role of oleic acid as a neurotrophic factor is supported *in vivo* by the expression of GAP-43 subsequent to the activation of SREBP-1 and the up-regulation of stearoyl-CoA desaturase during postnatal development of the brain. *Brain Res.* 977: 103-111.
7. Pascale, A., et al. 2004. Increase of the RNA-binding protein HuD and posttranscriptional up-regulation of the GAP-43 gene during spatial memory. *Proc. Natl. Acad. Sci. USA* 101: 1217-1222.
8. Kraus, K.S., et al. 2004. Superior olivary contributions to auditory system plasticity: medial but not lateral olivocochlear neurons are the source of cochleotomy-induced GAP-43 expression in the ventral cochlear nucleus. *J. Comp. Neurol.* 475: 374-390.
9. Shapiro, L.A., et al. 2004. Expression levels of cytoskeletal proteins indicate pathological aging of S100B transgenic mice: an immunohistochemical study of MAP-2, drebrin and GAP-43. *Brain Res.* 1019: 39-46.

## CHROMOSOMAL LOCATION

Genetic locus: GAP43 (human) mapping to 3q13.31.

## PRODUCT

GAP-43 (h4): 293T Lysate represents a lysate of human GAP-43 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

## APPLICATIONS

GAP-43 (h4): 293T Lysate is suitable as a Western Blotting positive control for human reactive GAP-43 antibodies. Recommended use: 10-20 µl per lane.

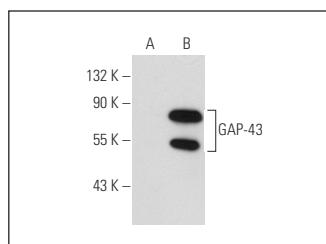
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

GAP-43 (7B10): sc-33705 is recommended as a positive control antibody for Western Blot analysis of enhanced human GAP-43 expression in GAP-43 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

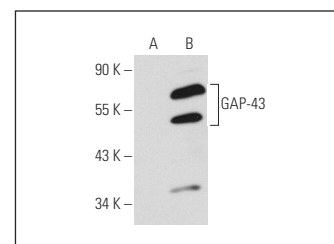
## RECOMMENDED SUPPORT REAGENTS

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.

## DATA



GAP-43 (7B10): sc-33705. Western blot analysis of GAP-43 expression in non-transfected: sc-117752 (A) and human GAP-43 transfected: sc-175907 (B) 293T whole cell lysates.



GAP-43 (B-5): sc-17790. Western blot analysis of GAP-43 expression in non-transfected: sc-117752 (A) and human GAP-43 transfected: sc-175907 (B) 293T whole cell lysates.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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](http://www.scbt.com) for detailed protocols and support products.