Datasheet for 600-401-693

EGR-1 Antibody

Overview

Description:	Anti-EGR-1 (RABBIT) Antibody - 600-401-693
Item No.:	600-401-693
Size:	100 µg
Applications:	ELISA, IHC, WB, ChIP, FC
Reactivity:	Human, Mouse
Host Species:	Rabbit

Product Details

Background:	EGR-1 (also called Early Growth Response protein 1, Krox-24 protein, ZIF268, Nerve growth factor-induced protein A or NGFI-A, Transcription factor ETR103, and Zinc finger protein 225 or AT225) is a transcriptional regulator that recognizes and binds to the DNA sequence 5'-CGCCCCCGC-3' (EGR-site). EGR-1 activates the transcription of target genes whose products are required for mitogenesis and differentiation. EGR-1 is a nuclear protein induced by growth factors. Expression has been identified in a variety of cancers.
Synonyms:	rabbit anti-EGR-1 Antibody, EGR1, EGR 1, AT225 antibody, Early growth response 1 antibody, KROX24 antibody, Nerve growth factor-induced protein A antibody, NGFI-A, Transcription factor ETR103, Transcription factor Zif268, ZNF225, Zinc finger protein 225, Zinc finger protein Krox-24
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	EGR1
Reactivity:	Human, Mouse
Immunogen Type:	Conjugated Peptide
Immunogen:	This affinity-purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to an internal region near amino acids 85 -115 of Human EGR-1.

Purity/Specificity:	This affinity purified antibody is directed against human EGR-1 protein. The product was affinity purified from monospecific antiserum by immunoaffinity purification. A BLAST analysis was used to suggest reactivity with this protein from human and chimpanzee sources based on 100% homology for the immunogen sequence. This antibody is expected to cross react with EGR-1.
Relevant Links:	• NCBI - NP_001955.1 • UniProtKB - P18146 • GeneID - 1958

Application Details

Tested Applications:	ELISA, IHC, WB
Suggested Applications:	ChIP, FC (Based on references)
Application Note:	This affinity purified antibody has been tested for use in ELISA, immunohistochemistry and western blot. Specific conditions for reactivity should be optimized by the end user. Expect a band at ~58 kDa in size corresponding to EGR-1 by western blotting in the appropriate cell lysate or extract.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:4,000 - 1:16,000
IHC:	2 µg/ml to 20 µg/ml
WB:	1:500 - 1:3,000

Formulation

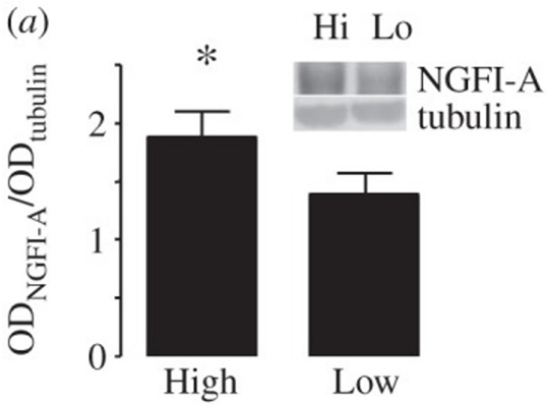
Physical State:	Liquid (sterile filtered)
Concentration:	0.93 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

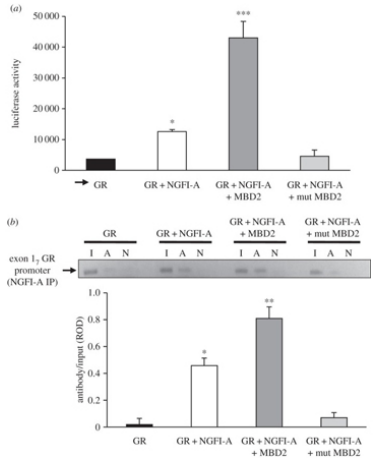
Shipping Condition:	Dry Ice

Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

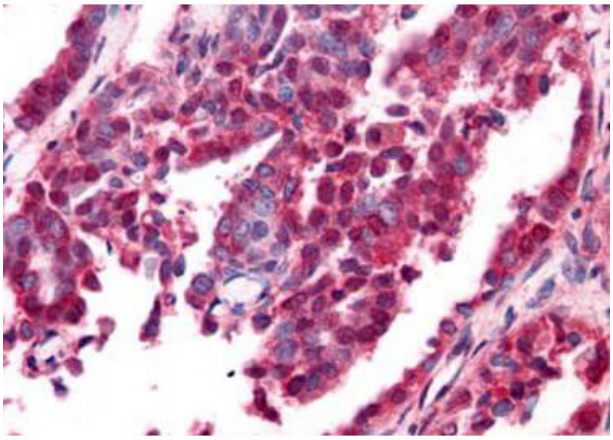
Images



Western Blot
Characterization of NGFI-A (p/n 600-401-693) in nuclear fractions from hippocampus of postnatal day 4 (P4) offspring of High- and Low-LG mothers. Data are presented as mean ± s.e.m. of optical densities (OD) normalized to tubulin for (a) NGFI-A. Representative bands are inset into the respective graphs. Fig 1. PMID: 22826348



ChIP
Mean ± s.e.m. of (a) luciferase expression (**p < 0.001; ***p < 0.0002) or (b) NGFI-A binding (*p < 0.05; **p < 0.001) to the exon 17 GR promoter–luciferase reporter plasmid cotransfected into HEK 293 cells without or with an NGFI-A alone, NGFI-A with MBD2 or NGFI-A with MBD2 mutant (see lower panel of figure 5b for construct) expression plasmid (n = 4 samples per treatment). (b) Mean ± s.e.m. antibody bound of exon 17 sequence amplified from NGFI-A immunoprecipitated cell extract as a function of input, determined using qRT-PCR, using the same conditions as described in panel (a) (*p < 0.05; **p < 0.001). Fig 7. PMID: 25135974



Immunohistochemistry
Rockland's Affinity Purified anti-EGR-1 antibody was used at a 10 ug/ml to detect nuclear and cytoplasmic signal with low background staining in a variety of tissues including multi-human, multi-brain and multi-cancer slides. Within the multi-tumor block, the antibody showed variable levels of nuclear and cytoplasmic staining between individual tumors, with some tumors showing moderate staining. This image shows EGR-1 staining of human ovarian carcinoma. Tissue was formalin-fixed and paraffin embedded. Personal Communication, Tina Roush, LifeSpanBiosciences, Seattle, WA.

Western Blot
Western blot using Rockland's Affinity Purified anti-EGR-1 antibody shows detection of a predominant band at ~58 kDa corresponding to EGR-1 present in mouse embryonic fibroblast whole cell lysate (p/n W10-001-371) (arrowhead). Approximately 35 µg of lysate was separated by 4-20% SDS-PAGE and transferred onto nitrocellulose. After blocking the membrane was probed with the primary antibody diluted to 1:1,500. Reaction occurred 2h at room temperature followed by washes and reaction with a 1:10,000 dilution of IRDye™800 conjugated Gt-a-Rabbit IgG [H&L] MX (p/n 611-132-122) for 45 min at room temperature. IRDye™800 fluorescence image was captured using the Odyssey® Infrared Imaging System developed by LI-COR. IRDye is a trademark of LI-COR, Inc. Other detection systems will yield similar results.

References

- Weaver ICG et al. The methylated-DNA binding protein MBD2 enhances NGFI-A (egr-1)-mediated transcriptional activation of the glucocorticoid receptor. *Philos Trans R Soc Lond B Biol Sci.* (2014)
- Hellstrom IC et al. Maternal licking regulates hippocampal glucocorticoid receptor transcription through a thyroid hormone–serotonin–NGFI-A signalling cascade. *Philos Trans R Soc Lond B Biol Sci.* (2012)

Disclaimer

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