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

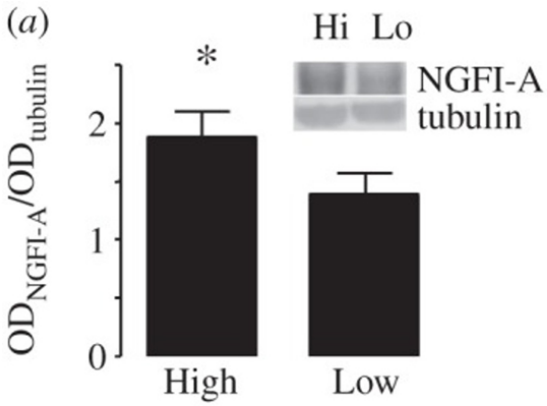
Physical State:	Liquid (sterile filtered)
Concentration:	0.93 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

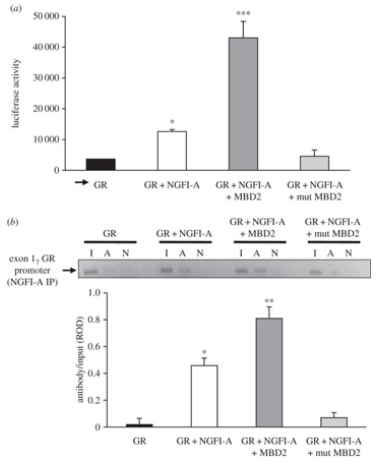
Shipping Condition:	Dry Ice

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.

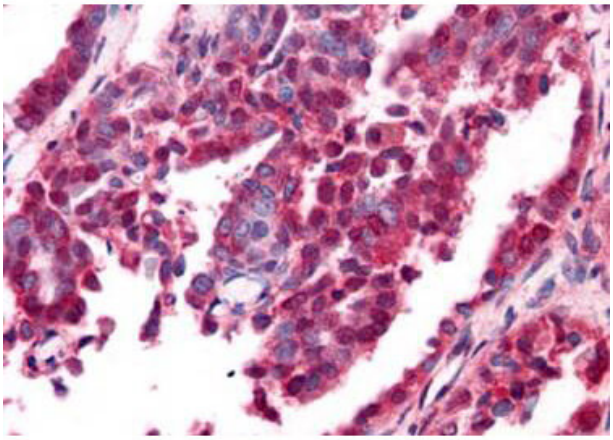
Images



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

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.