SANTA CRUZ BIOTECHNOLOGY, INC.

Egr-3 (A-7): sc-390967

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Egr-1, Egr-2, Egr-3 and Egr-4 are nuclear transcription factors belonging to the Egr C_2H_2-type zinc-finger protein family and containing three C_2H_2-type zinc fingers. As immediate early proteins, Egr transcription factors are rapidly induced by diverse extracellular stimuli. They are subject to tight differential control through diverse mechanisms at several levels of regulation: transcriptional; translational and posttranslational (including glycosylation, phosphorylation and redox) mechanisms; and protein-protein interaction. Egr-3 is involved in muscle spindle development and is expressed in T cells 20 minutes following activation.

CHROMOSOMAL LOCATION

Genetic locus: EGR3 (human) mapping to 8p21.3; Egr3 (mouse) mapping to 14 D2.

SOURCE

Egr-3 (A-7) is a mouse monoclonal antibody raised against amino acids 1-180 of Egr-3 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-390967 X, 200 µg/0.1 ml.

Egr-3 (A-7) is available conjugated to agarose (sc-390967 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390967 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390967 PE), fluorescein (sc-390967 FITC), Alexa Fluor® 488 (sc-390967 AF488), Alexa Fluor® 546 (sc-390967 AF546), Alexa Fluor® 594 (sc-390967 AF594) or Alexa Fluor® 647 (sc-390967 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390967 AF680) or Alexa Fluor® 790 (sc-390967 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Egr-3 (A-7) is recommended for detection of Egr-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for Egr-3 siRNA (h): sc-35268, Egr-3 siRNA (m): sc-35269, Egr-3 shRNA Plasmid (h): sc-35268-SH, Egr-3 shRNA Plasmid (m): sc-35269-SH, Egr-3 shRNA (h) Lentiviral Particles: sc-35268-V and Egr-3 shRNA (m) Lentiviral Particles: sc-35269-V.

Egr-3 (A-7) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

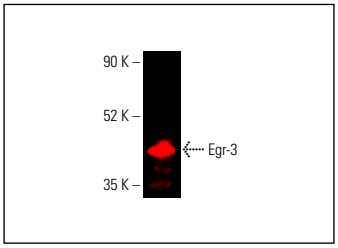
Molecular Weight of Egr-3: 43 kDa.

Positive Controls: FHs 173We cell lysate: sc-2417.

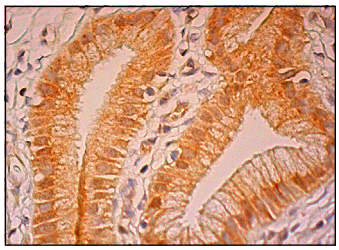
STORAGE

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

DATA



Egr-3 (A-7): sc-390967. Near-Infrared western blot analysis of Egr-3 expression in FHs 173We whole cell lysate. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG_{2b} BP-CFL 790: sc-542750.



Egr-3 (A-7): sc-390967. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing nuclear and cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Shen, G., et al. 2019. MiR-454-3p promotes of human glioma cell growth by targeting Egr-3. Exp. Ther. Med. 18: 4031-4039.
2. Shin, S.H., et al. 2020. Loss of Egr-3 is an independent risk factor for metastatic progression in prostate cancer. Oncogene 39: 5839-5854.
3. Nie, F., et al. 2021. Schizophrenia risk candidate Egr-3 is a novel transcriptional regulator of RELN and regulates neurite outgrowth via the Reelin signal pathway *in vitro*. J. Neurochem. 157: 1745-1758.
4. Barrett, P., et al. 2022. Neuregulin 1 drives morphological and phenotypical changes in C2C12 myotubes: towards *de novo* formation of intrafusal fibres *in vitro*. Front. Cell Dev. Biol. 9: 760260.
5. Janus, P., et al. 2022. HSF1 can prevent inflammation following heat shock by inhibiting the excessive activation of the ATF3 and JUN&FOS genes. Cells 11: 2510.
6. Cao, R., et al. 2023. Intrafusal-fiber LRP4 for muscle spindle formation and maintenance in adult and aged animals. Nat. Commun. 14: 744.
7. Wu, D., et al. 2023. Genome-wide 5-formylcytosine redistribution in KCl-stimulated mouse primary cortical neurons is associated with neuronal activity. ACS Chem. Neurosci. 14: 4352-4362.
8. Wu, K., et al. 2024. Loss of SLC27A5 activates hepatic stellate cells and promotes liver fibrosis via unconjugated cholic acid. Adv. Sci. 11: e2304408.
9. Ge, Y., et al. 2024. Immunoinhibitory effects of hypoxia-driven reprogramming of EGR1hi and Egr-3 positive B cells in the nasopharyngeal carcinoma microenvironment. Oral Oncol. 158: 106999.

RESEARCH USE

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