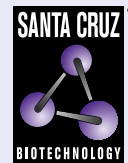


14-3-3  $\epsilon$  (8C3): sc-23957

The Power to Question

**BACKGROUND**

14-3-3 proteins regulate many cellular processes relevant to cancer biology, notably apoptosis, mitogenic signaling and cell-cycle checkpoints. Seven isoforms comprise this family of signaling intermediates, denoted 14-3-3  $\beta$ ,  $\gamma$ ,  $\epsilon$ ,  $\zeta$ ,  $\eta$ ,  $\theta$  and  $\sigma$ . 14-3-3 proteins form dimers that present two binding sites for ligand proteins, thereby bringing together two proteins that may not otherwise associate. These ligands largely share a 14-3-3 consensus binding motif and exhibit serine/threonine phosphorylation. 14-3-3 proteins function in broad regulation of these ligand proteins, by cytoplasmic sequestration, occupation of interaction domains and import/export sequences, prevention of degradation, activation/repression of enzymatic activity and facilitation of protein modification, and thus loss of expression contributes to a vast array of pathogenic cellular activities.

**CHROMOSOMAL LOCATION**

Genetic locus: YWHAE (human) mapping to 17p13.3; Ywhae (mouse) mapping to 11 B5.

**SOURCE**

14-3-3  $\epsilon$  (8C3) is a mouse monoclonal antibody raised against partially purified proteins from pineal gland of ovine origin.

**PRODUCT**

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

14-3-3  $\epsilon$  (8C3) is available conjugated to agarose (sc-23957 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-23957 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-23957 PE), fluorescein (sc-23957 FITC), Alexa Fluor® 488 (sc-23957 AF488), Alexa Fluor® 546 (sc-23957 AF546), Alexa Fluor® 594 (sc-23957 AF594) or Alexa Fluor® 647 (sc-23957 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-23957 AF680) or Alexa Fluor® 790 (sc-23957 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

**APPLICATIONS**

14-3-3  $\epsilon$  (8C3) is recommended for detection of 14-3-3  $\epsilon$  of mouse, rat, human and ovine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

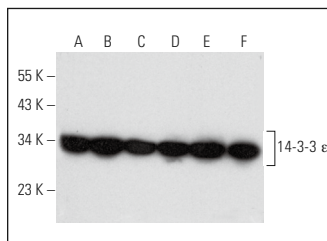
Suitable for use as control antibody for 14-3-3  $\epsilon$  siRNA (h): sc-29588, 14-3-3  $\epsilon$  siRNA (m): sc-29589, 14-3-3  $\epsilon$  siRNA (r): sc-270535, 14-3-3  $\epsilon$  shRNA Plasmid (h): sc-29588-SH, 14-3-3  $\epsilon$  shRNA Plasmid (m): sc-29589-SH, 14-3-3  $\epsilon$  shRNA Plasmid (r): sc-270535-SH, 14-3-3  $\epsilon$  shRNA (h) Lentiviral Particles: sc-29588-V, 14-3-3  $\epsilon$  shRNA (m) Lentiviral Particles: sc-29589-V and 14-3-3  $\epsilon$  shRNA (r) Lentiviral Particles: sc-270535-V.

Molecular Weight of 14-3-3  $\epsilon$ : 30 kDa.

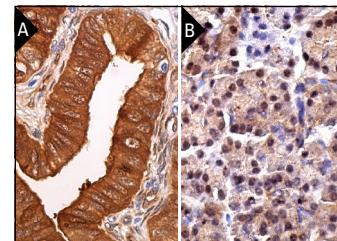
Positive Controls: Hela whole cell lysate: sc-2200, SK-N-SH cell lysate: sc-2410 or NIH/3T3 whole cell lysate: sc-2210.

**STORAGE**

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

**DATA**

14-3-3  $\epsilon$  (8C3): sc-23957. Western blot analysis of 14-3-3  $\epsilon$  expression in HeLa (A), SK-N-SH (B), NIH/3T3 (C), c4 (D), C6 (E) and A-10 (F) whole cell lysates.



14-3-3  $\epsilon$  (8C3): sc-23957. Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing cytoplasmic and nuclear staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing nuclear and cytoplasmic staining of glandular cells (B).

**SELECT PRODUCT CITATIONS**

- Jin, Y., et al. 2006. 14-3-3 $\gamma$  binds to MDMX that is phosphorylated by UV-activated Chk1, resulting in p53 activation. *EMBO J.* 25: 1207-1218.
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**RESEARCH USE**

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

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