

14-3-3 η (E-12): sc-17287

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 β , γ , ϵ , ζ , η , θ and σ . 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: YWHAH (human) mapping to 22q12.3; Ywhah (mouse) mapping to 5 B1.

SOURCE

14-3-3 η (E-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of 14-3-3 η of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-17287 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

14-3-3 η (E-12) is recommended for detection of 14-3-3 η of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

14-3-3 η (E-12) is also recommended for detection of 14-3-3 η in additional species, including equine.

Suitable for use as control antibody for 14-3-3 η siRNA (h): sc-43581, 14-3-3 η siRNA (m): sc-43582, 14-3-3 η shRNA Plasmid (h): sc-43581-SH, 14-3-3 η shRNA Plasmid (m): sc-43582-SH, 14-3-3 η shRNA (h) Lentiviral Particles: sc-43581-V and 14-3-3 η shRNA (m) Lentiviral Particles: sc-43582-V.

Molecular Weight of 14-3-3 η : 28 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, KNRK whole cell lysate: sc-2214 or SW480 cell lysate: sc-2219.

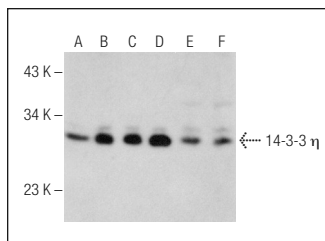
STORAGE

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

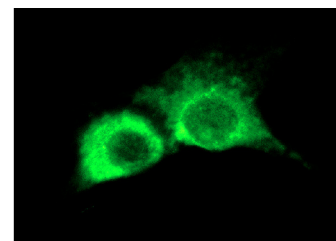
RESEARCH USE

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

DATA



14-3-3 η (E-12) sc-17287. Western blot analysis of 14-3-3 η expression in NIH/3T3 (A), EOC 20 (B), KNRK (C), WEHI-231 (D), SW480 (E) and T98G (F) whole cell lysates.



14-3-3 η (E-12): sc-17287. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Ubl, A., et al. 2002. 14-3-3 protein is a component of Lewy bodies in Parkinson's disease-mutation analysis and association studies of 14-3-3 η . *Brain Res. Mol. Brain Res.* 108: 33-39.
- Schindler, C.K., et al. 2006. Isoform- and subcellular fraction-specific differences in hippocampal 14-3-3 levels following experimentally evoked seizures and in human temporal lobe epilepsy. *J. Neurochem.* 99: 561-569.
- Shirakashi, Y., et al. 2006. α -Synuclein is colocalized with 14-3-3 and synphilin-1 in A53T transgenic mice. *Acta Neuropathol.* 112: 681-689.
- Di Fede, G., et al. 2007. The ϵ isoform of 14-3-3 protein is a component of the prion protein amyloid deposits of Gerstmann-Straussler-Scheinker disease. *J. Neuropathol. Exp. Neurol.* 66: 124-130.
- Wang, J., et al. 2009. 14-3-3 ζ contributes to tyrosine hydroxylase activity in MN9D cells: localization of dopamine regulatory proteins to mitochondria. *J. Biol. Chem.* 98: 284: 14011-14019.
- Titus, M.A., et al. 2009. 14-3-3 η amplifies androgen receptor actions in prostate cancer. *Clin. Cancer Res.* 15: 7571-7581.
- Nakamura, T., et al. 2010. The PX-RICS-14-3-3 ζ/θ complex couples N-cadherin- β -catenin with dynein-dynactin to mediate its export from the endoplasmic reticulum. *J. Biol. Chem.* 285: 16145-16154.
- De, S. and Kline, D. 2013. Evidence for the requirement of 14-3-3 η (YWHAH) in meiotic spindle assembly during mouse oocyte maturation. *BMC Dev. Biol.* 13: 10.

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Try **14-3-3 η (6A12): sc-293464** or **pan 14-3-3 (H-8): sc-1657**, our highly recommended monoclonal alternatives to 14-3-3 η (E-12).