**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 \( \alpha \). 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.

**SOURCE**

pan 14-3-3 (H-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1-30 at the N-terminus of pan 14-3-3 of human origin.

**PRODUCT**

Each vial contains 200 µg IgG2b 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-1657 X, 200 µg/0.1 ml.

pan 14-3-3 (H-8) is available conjugated to HRP (sc-1657 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; and to either phycoerythrin (sc-1657 PE), fluorescein (sc-1657 FITC), Alexa Fluor® 488 (sc-1657 AF488) or Alexa Fluor® 647 (sc-1657 AF647), 200 µg/ml, for IF, IHC(P) and FCM.

In addition, pan 14-3-3 (H-8) is available conjugated to either TRITC (sc-1657 TRITC), 200 µg/ml or Alexa Fluor® 405 (sc-1657 AF405), 100 µg/2 ml, for IF, IHC(P) and FCM.

Blocking peptide available for competition studies, sc-1657 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

**APPLICATIONS**

pan 14-3-3 (H-8) is recommended for detection of pan 14-3-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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), flow cytometry (1 µg per 1 x 10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). pan 14-3-3 (H-8) is also recommended for detection of pan 14-3-3 in additional species, including equine, canine, bovine, porcine and avian.

pan 14-3-3 (H-8) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of pan 14-3-3: 30 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or Jurkat whole cell lysate: sc-2204.

**STORAGE**

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

**DATA**

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

See pan 14-3-3 (B-8): sc-133233 for pan 14-3-3 antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.