SANTA CRUZ BIOTECHNOLOGY, INC.

# SEI-1 (3H4): sc-517080

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*The Power to Question*

## BACKGROUND

SEI-1, also known as SERTAD1 (SERTA domain containing 1) or TRIP-Br1 (transcriptional regulator interacting with the PHD-bromodomain 1), is a transcriptional regulator that integrates signals provided by transcription factors. Acting at E2F-responsive promoters, SEI-1 interacts with the PHD- and bromodomains of proteins such as TIF1 and DP-1, thereby transmitting their signals to the promoter and stimulating transcriptional activity. SEI-1 exists as a multiprotein complex with E2F-1 and DP-1 and is expressed at different levels throughout the cell cycle, allowing it to regulate cell cycle progression via promoter control during the $G_1$ and S phases. Additionally, SEI-1 can render the activity of the cyclin D-Cdk4 complex, an important catalyst of the cell cycle, resistant to the inhibitory effects of p16. Overexpression of SEI-1 is implicated in the development of squamous cell carcinomas of the head and neck.

## REFERENCES


1. Hsu, S.I., et al. 2001. TRIP-Br: a novel family of PHD zinc finger- and bromodomain-interacting proteins that regulate the transcriptional activity of E2F-1/DP-1. EMBO J. 20: 2273-2285.
2. Tang, T.C., et al. 2002. Identification of a candidate oncogene SEI-1 within a minimal amplified region at 19q13.1 in ovarian cancer cell lines. Cancer Res. 62: 7157-7161.
3. Sim, K.G., et al. 2004. TRIP-Br links E2F to novel functions in the regulation of cyclin E expression during cell cycle progression and in the maintenance of genomic stability. Cell Cycle 3: 1296-1304.
4. Tang, D.J., et al. 2005. Oncogenic transformation by SEI-1 is associated with chromosomal instability. Cancer Res. 65: 6504-6508.
5. Watanabe-Fukunaga, R., et al. 2005. SEI family of nuclear factors regulates p53-dependent transcriptional activation. Genes Cells 10: 851-860.
6. Bott, S.R., et al. 2005. $p21^{WAF1/CIP1}$ gene is inactivated in metastatic prostatic cancer cell lines by promoter methylation. Prostate Cancer Prostatic Dis. 8: 321-326.
7. Li, J., et al. 2005. Dissection of CDK4-binding and transactivation activities of $p34^{SEI-1}$ and comparison between functions of $p34^{SEI-1}$ and $p16^{INK4A}$. Biochemistry 44: 13246-13256.
8. Sim, K.G., et al. 2006. The TRIP-Br family of transcriptional regulators is essential for the execution of cyclin E-mediated cell cycle progression. Cell Cycle 5: 1111-1115.


## CHROMOSOMAL LOCATION

Genetic locus: SERTAD1 (human) mapping to 19q13.2.

## SOURCE

SEI-1 (3H4) is a mouse monoclonal antibody raised against amino acids 1-236 representing full length SEI-1 of human origin.

## PRODUCT

Each vial contains 100 µg $IgG_{2a}$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

SEI-1 (3H4) is recommended for detection of SEI-1 of 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

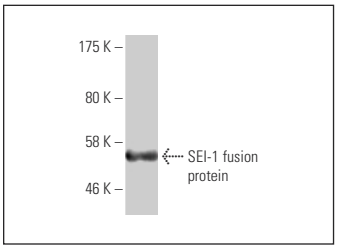
Suitable for use as control antibody for SEI-1 siRNA (h): sc-62988, SEI-1 shRNA Plasmid (h): sc-62988-SH and SEI-1 shRNA (h) Lentiviral Particles: sc-62988-V.

Molecular Weight of SEI-1: 25 kDa.

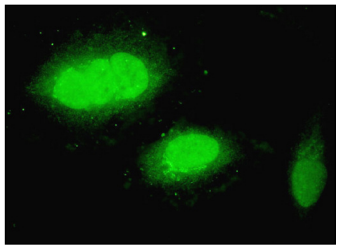
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA




SEI-1 (3H4): sc-517080. Western blot analysis of human recombinant SEI-1 fusion protein.



WDR79 (1F12); sc-517078. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

## 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.

## PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.