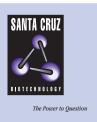
SANTA CRUZ BIOTECHNOLOGY, INC.

TOK-1α (V-19): sc-15414



BACKGROUND

Combinations of cyclin-cyclin-dependent kinase (CDK) complex and their inhibitors coordinately regulate cell-cycle movement. INK4 family proteins p15, p16, p18 and P19 inhibit CDK4/CDK, whereas Cip/Kip family proteins p21, p27 and P57, inhibit all of the CDKs. p21 induces cell cycle arrest, thus inhibiting CDK activity for Rb inactivation. In addition to binding of CDKcyclin to the N-terminal region of p21, other proteins such as proliferating cell nuclear antigen (PCNA), SET/TAF1 and calmodulin are able to bind to the C-proximal region of p21. A novel p21 Cip1-binding protein TOK-1 binds to the C-terminal region of p21. TOK-1 is alternatively spliced to form TOK-1 α and TOK-1 β , which are comprised of 322 and 314 amino acids, respectively. TOK-1 co-localizes with p21 in nuclei and has similiar expression pattern to that of p21. TOK-1 α , but not TOK-1 β , directly binds to the C-terminal proximal region of p21 and both are expressed at the G1/S boundary of cell-cycle. TOK-1 α preferentially binds to an active form of CDK2 via p21 to make a ternary complex in human cells. In addition, TOK-1 α enhances the inhibitory activity of p21 to histone H1 kinase activity of CDK2, suggesting that TOK-1 α may be a new type of CDK2 modulator.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: BCCIP (human) mapping to 10q26.2; Bccip (mouse) mapping to 7.

SOURCE

TOK-1 α (V-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of TOK-1 α of human origin.

PRODUCT

Each vial contains 200 μg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-15414 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TOK-1 α (V-19) is recommended for detection of TOK-1 α of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluores-cence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.