

Cabin-1 (K-14): sc-12519

BACKGROUND

Calcineurin binding protein (Cabin-1) and the corresponding rat homolog, designated Cain, are nuclear phosphoproteins that are widely expressed and regulate the serine/threonine phosphatase activity of calcineurin and influence T cell signaling and apoptosis. Calcineurin is required for the transcriptional activation of cytokines and the activation of various transcription factors, including NFAT, NF κ B and AP-1, involved in T cell receptor (TCR)-mediated signaling. The regulation of calcineurin depends on the changes in intracellular calcium concentrations and the activity of protein kinase C. TCR activation results in PKC inducing the hyperphosphorylation of Cabin-1, which facilitates the high affinity binding of Cabin-1 to calcineurin. This complex formation, in turn, inhibits calcineurin activity and attenuates TCR-mediated signaling. Cabin-1 also associates directly with MEF-2 proteins, a family of transcription factors that regulate apoptosis signaling in T cells. This association between Cabin-1 and MEF-2 leads to the inhibition of MEF-2-mediated gene transcription and the inhibition of apoptosis.

REFERENCES

- Shenolikar, S. 1994. Protein serine/threonine phosphatases—new avenues for cell regulation. *Annu. Rev. Cell Biol.* 10: 55-86.
- Black, B.L. and Olson, E.N. 1998. Transcriptional control of muscle development by myocyte enhancer factor-2 (MEF-2) proteins. *Annu. Rev. Cell Dev. Biol.* 14: 167-196.
- Sun, L., Youn, H.D., Loh, C., Stolow, M., He, W. and Liu, J.O. 1998. Cabin-1, a negative regulator for calcineurin signaling in T lymphocytes. *Immunity* 8: 703-711.
- Lai, M.M., Burnett, P.E., Wolosker, H., Blackshaw, S. and Snyder, S.H. 1998. Cain, a novel physiologic protein inhibitor of calcineurin. *J. Biol. Chem.* 273: 18325-18331.

CHROMOSOMAL LOCATION

Genetic locus: CABIN1 (human) mapping to 22q11.23; Cabin1 (mouse) mapping to 10 C1.

SOURCE

Cabin-1 (K-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Cabin-1 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-12519 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Cabin-1 (K-14) is recommended for detection of Cabin-1 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).

Cabin-1 (K-14) is also recommended for detection of Cabin-1 in additional species, including equine, canine, bovine, porcine and avian.

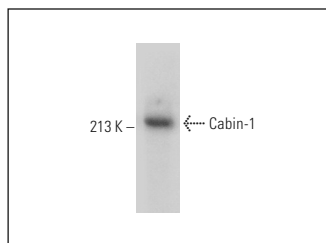
Suitable for use as control antibody for Cabin-1 siRNA (h): sc-43652, Cabin-1 siRNA (m): sc-141959, Cabin-1 shRNA Plasmid (h): sc-43652-SH, Cabin-1 shRNA Plasmid (m): sc-141959-SH, Cabin-1 shRNA (h) Lentiviral Particles: sc-43652-V and Cabin-1 shRNA (m) Lentiviral Particles: sc-141959-V.

Positive Controls: HeLa nuclear extract: sc-2120 or SK-N-SH cell lysate: sc-2410.

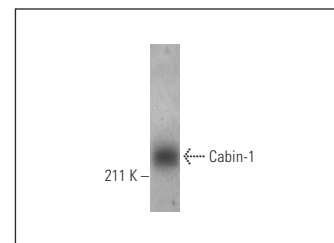
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: 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.

DATA



Cabin-1 (K-14): sc-12519. Western blot analysis of Cabin-1 expression in SK-N-SH whole cell lysate.



Cabin-1 (K-14): sc-12519. Western blot analysis of Cabin-1 expression in HeLa nuclear extract.

RESEARCH USE

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

MONOS
Satisfaction
Guaranteed

Try **Cabin-1 (B-11): sc-514269** or **Cabin-1 (E-11): sc-514250**, our highly recommended monoclonal alternatives to Cabin-1 (K-14).