

# Calcyclin (F-1): sc-271396

## BACKGROUND

Calcyclin, also known as Prolactin receptor-associated protein (PRA), growth factor-inducible protein 2A9, S-100 calcium-binding protein A6 (S-100A6) or MLN 4, is a homodimeric member of the S-100 calcium-binding protein family whose expression is upregulated in proliferating and differentiating cells. Calcyclin is inducible by growth factors and overexpressed in acute myeloid leukemias. It is expressed in a cell-specific manner in subpopulations of neurons and astrocytes and in epithelial cells and fibroblasts. Calcyclin is a specific target of S-100B protein *in vivo*. The binding of Calcyclin to S-100B is stabilized by S-100B-bound calcium and zinc. Calcyclin associates with both Annexin XI and CacyBP (Calcyclin-binding protein). It functions to activate several processes along the calcium signal transduction pathway including the regulation of cell growth, proliferation, secretion and exocytosis.

## REFERENCES

1. Calabretta, B., et al. 1986. Molecular cloning of the cDNA for a growth factor-inducible gene with strong homology to S-100, a calcium-binding protein. *J. Biol. Chem.* 261: 12628-12632.
2. Gabius, H.J., et al. 1989. Identification of a cell cycle-dependent gene product as a sialic acid-binding protein. *Biochem. Biophys. Res. Commun.* 163: 506-512.
3. Yamashita, N., et al. 1999. Distribution of a specific calcium-binding protein of the S100 protein family, S100A6 (Calcyclin), in subpopulations of neurons and glial cells of the adult rat nervous system. *J. Comp. Neurol.* 404: 235-257.
4. Komatsu, K., et al. 2000. Increased expression of S100A6 (Calcyclin), a calcium-binding protein of the S100 family, in human colorectal adenocarcinomas. *Clin. Cancer Res.* 6: 172-177.

## CHROMOSOMAL LOCATION

Genetic locus: S100A6 (human) mapping to 1q21.3.

## SOURCE

Calcyclin (F-1) is a mouse monoclonal antibody raised against amino acids 36-90 mapping at the C-terminus of Calcyclin of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Calcyclin (F-1) is available conjugated to agarose (sc-271396 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271396 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271396 PE), fluorescein (sc-271396 FITC), Alexa Fluor<sup>®</sup> 488 (sc-271396 AF488), Alexa Fluor<sup>®</sup> 546 (sc-271396 AF546), Alexa Fluor<sup>®</sup> 594 (sc-271396 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-271396 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-271396 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-271396 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## RESEARCH USE

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

## APPLICATIONS

Calcyclin (F-1) is recommended for detection of Calcyclin of human origin by Western Blotting (starting dilution 1:100, 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 Calcyclin siRNA (h): sc-43655, Calcyclin shRNA Plasmid (h): sc-43655-SH and Calcyclin shRNA (h) Lentiviral Particles: sc-43655-V.

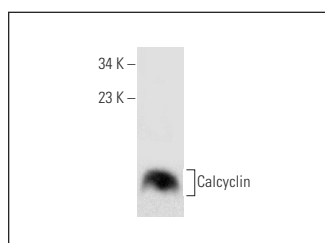
Molecular Weight of Calcyclin: 11 kDa.

Positive Controls: WI-38 whole cell lysate: sc-364260, HeLa whole cell lysate: sc-2200 or human lung extract: sc-363767.

## 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<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 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<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



Calcyclin (F-1): sc-271396. Western blot analysis of Calcyclin expression in WI-38 whole cell lysate.

## SELECT PRODUCT CITATIONS

1. Gago-Fuentes, R., et al. 2015. Proteomic analysis of connexin 43 reveals novel interactors related to osteoarthritis. *Mol. Cell. Proteomics* 14: 1831-1845.
2. Lyu, X., et al. 2015. High-level S100A6 promotes metastasis and predicts the outcome of T1-T2 stage in clear cell renal cell carcinoma. *Cell Biochem. Biophys.* 71: 279-290.

## STORAGE

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

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