

# StARD13 (H-10): sc-377054

## BACKGROUND

The StARD (steroidogenic acute regulatory protein-related lipid transfer (START) domain containing) family of proteins is comprised of 15 different members. All members contain the characteristic START domain and are believed to play key roles in the metabolism and transport of lipids. The StARD proteins are grouped into six subfamilies based on their START domain sequences. StARD8, StARD12 and StARD13 constitute one subfamily, namely the RhoGAP START group. StARD13, also known as DLC2 (deleted in liver cancer protein 2) or GT650, is a RhoGAP protein specific for Rho A and Cdc42. StARD13 contains one RhoGAP domain, one SAM (sterile alpha motif) domain and one START domain. It localizes to the mitochondrion and cytoplasmic speckles in close association with lipid droplets, suggesting an additional function for StARD13 in mitochondrial lipid transport. StARD13 is ubiquitously expressed but is often deleted in hepatocellular and breast cancer cells, implying that StARD13 also acts as a tumor suppressor.

## REFERENCES

- Ching, Y.P., et al. 2003. Deleted in liver cancer (DLC) 2 encodes a RhoGAP protein with growth suppressor function and is underexpressed in hepatocellular carcinoma. *J. Biol. Chem.* 278: 10824-10830.
- Katoh, Y., et al. 2004. Identification and characterization of ARHGAP27 gene in silico. *Int. J. Mol. Med.* 14: 943-947.
- Ullmannova, V., et al. 2006. Expression profile of the tumor suppressor genes DLC-1 and DLC-2 in solid tumors. *Int. J. Oncol.* 29: 1127-1132.
- Ng, D.C., et al. 2006. Mitochondrial targeting of growth suppressor protein DLC2 through the START domain. *FEBS Lett.* 580: 191-198.

## CHROMOSOMAL LOCATION

Genetic locus: STARD13 (human) mapping to 13q13.1; Stard13 (mouse) mapping to 5 G3.

## SOURCE

StARD13 (H-10) is a mouse monoclonal antibody raised against amino acids 1-60 mapping at the N-terminus of StARD13 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.

StARD13 (H-10) is available conjugated to agarose (sc-377054 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377054 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377054 PE), fluorescein (sc-377054 FITC), Alexa Fluor<sup>®</sup> 488 (sc-377054 AF488), Alexa Fluor<sup>®</sup> 546 (sc-377054 AF546), Alexa Fluor<sup>®</sup> 594 (sc-377054 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-377054 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-377054 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-377054 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## STORAGE

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

## APPLICATIONS

StARD13 (H-10) is recommended for detection of StARD13 of mouse, rat and 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 StARD13 siRNA (h): sc-63070, StARD13 siRNA (m): sc-63071, StARD13 shRNA Plasmid (h): sc-63070-SH, StARD13 shRNA Plasmid (m): sc-63071-SH, StARD13 shRNA (h) Lentiviral Particles: sc-63070-V and StARD13 shRNA (m) Lentiviral Particles: sc-63071-V.

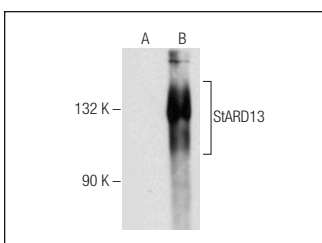
Molecular Weight of StARD13: 125 kDa.

Positive Controls: StARD13 (m): 293T Lysate: sc-123813.

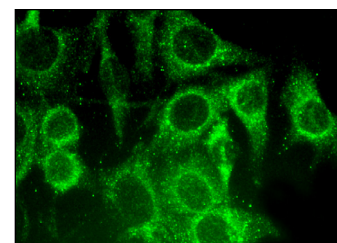
## RECOMMENDED SUPPORT REAGENTS

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



StARD13 (H-10): sc-377054. Western blot analysis of StARD13 expression in non-transfected: sc-117752 (A) and mouse StARD13 transfected: sc-123813 (B) 293T whole cell lysates.



StARD13 (H-10): sc-377054. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

- Vitiello, E., et al. 2014. The tumour suppressor DLC2 ensures mitotic fidelity by coordinating spindle positioning and cell-cell adhesion. *Nat. Commun.* 5: 5826.
- Chen, L., et al. 2019. Inhibition of miR-9-5p suppresses prostate cancer progress by targeting StARD13. *Cell. Mol. Biol. Lett.* 24: 20.

## RESEARCH USE

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

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