

# StARD8 (E-2): sc-166725

## BACKGROUND

The StARD (steroidogenic acute regulatory protein-related lipid transfer (START) domain containing) family of proteins is comprised of fifteen 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. StARD8, also known as DLC3 (deleted in liver cancer protein 3) or STARTGAP3, is a RhoGAP protein specific for Rho A and Cdc42. Localizing to focal adhesions, StARD8 contains one RhoGAP domain, one SAM (sterile  $\alpha$  motif) domain and one START domain. Overexpression of StARD8 in various cancer cell lines represses cell proliferation and colony formation, implying that StARD8 acts as a tumor suppressor and plays a role in the regulation of cell growth.

## REFERENCES

1. Katoh, M. 2004. Characterization of human ARHGAP10 gene in silico. *Int. J. Oncol.* 25: 1201-1206.
2. Sjöblom, T., et al. 2006. The consensus coding sequences of human breast and colorectal cancers. *Science* 314: 268-274.
3. Ullmannova, V. and Popescu, N.C. 2006. Expression profile of the tumor suppressor genes DLC-1 and DLC-2 in solid tumors. *Int. J. Oncol.* 29: 1127-1132.
4. Ng, D.C., et al. 2006. Mitochondrial targeting of growth suppressor protein DLC-2 through the START domain. *FEBS Lett.* 580: 191-198.
5. Durkin, M.E., et al. 2007. Deleted in liver cancer 3 (DLC-3), a novel Rho GTPase-activating protein, is downregulated in cancer and inhibits tumor cell growth. *Oncogene* 26: 4580-4589.

## CHROMOSOMAL LOCATION

Genetic locus: STARD8 (human) mapping to Xq13.1; Stard8 (mouse) mapping to X C3.

## SOURCE

StARD8 (E-2) is a mouse monoclonal antibody raised against amino acids 731-830 mapping within an internal region of StARD8 of human origin.

## PRODUCT

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

StARD8 (E-2) is available conjugated to agarose (sc-166725 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166725 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166725 PE), fluorescein (sc-166725 FITC), Alexa Fluor<sup>®</sup> 488 (sc-166725 AF488), Alexa Fluor<sup>®</sup> 546 (sc-166725 AF546), Alexa Fluor<sup>®</sup> 594 (sc-166725 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-166725 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-166725 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-166725 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

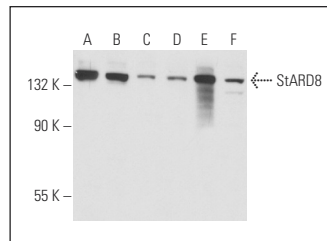
StARD8 (E-2) is recommended for detection of StARD8 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for StARD8 siRNA (h): sc-63080, StARD8 siRNA (m): sc-63081, StARD8 shRNA Plasmid (h): sc-63080-SH, StARD8 shRNA Plasmid (m): sc-63081-SH, StARD8 shRNA (h) Lentiviral Particles: sc-63080-V and StARD8 shRNA (m) Lentiviral Particles: sc-63081-V.

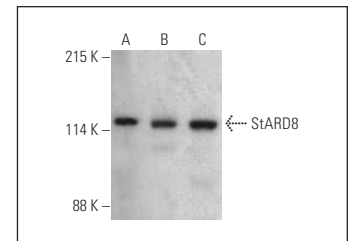
Molecular Weight of StARD8: 113/122 kDa.

Positive Controls: MES-SA/Dx5 cell lysate: sc-2284, NIH/3T3 whole cell lysate: sc-2210 or HeLa whole cell lysate: sc-2200.

## DATA



StARD8 (E-2): sc-166725. Western blot analysis of StARD8 expression in MES-SA/Dx5 (A), HeLa (B), Caki-1 (C), JAR (D), NIH/3T3 (E) and KNRK (F) whole cell lysates.



StARD8 (E-2): sc-166725. Western blot analysis of StARD8 expression in JAR (A), HeLa (B) and MES-SA/Dx5 (C) whole cell lysates. Detection reagent used: m-IgG<sub>1</sub> BP-HRP: sc-525408.

## SELECT PRODUCT CITATIONS

1. Braun, A.C., et al. 2015. The Rho-specific GAP protein DLC3 coordinates endocytic membrane trafficking. *J. Cell Sci.* 128: 1386-1399.
2. Hendrick, J., et al. 2016. The polarity protein Scribble positions DLC3 at adherens junctions to regulate Rho signaling. *J. Cell Sci.* 129: 3583-3596.
3. Rhys, A.D., et al. 2018. Loss of E-cadherin provides tolerance to centrosome amplification in epithelial cancer cells. *J. Cell Biol.* 217: 195-209.
4. Eisler, S.A., et al. 2018. A Rho signaling network links microtubules to PKD controlled carrier transport to focal adhesions. *Elife* 7: e35907.
5. Noll, B., et al. 2019. DLC3 suppresses MT1-MMP-dependent matrix degradation by controlling RhoB and Actin remodeling at endosomal membranes. *J. Cell Sci.* 132: jcs223172.

## 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.