

StARD7 (K-20): sc-67856

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. PC-TP (StARD2), StARD7, StARD10 and GPBP (StARD11) constitute one subfamily, namely the STARD2/PCTP group. StARD7, also known as GTT1 (gestational trophoblastic tumor 1), is a widely expressed protein with a possible function in phospholipid transport. The sequence of its START domain suggests that StARD7 may bind to charged lipids. StARD7 is overexpressed in a number of cancer cell lines and thus may be involved in tumor signaling mediated by phospholipids.

REFERENCES

1. Soccio, R.E. and Breslow, J.L. 2003. StAR-related lipid transfer (START) proteins: mediators of intracellular lipid metabolism. *J. Biol. Chem.* 278: 22183-22186.
2. Durand, S., Angeletti, S. and Genti-Raimondi, S. 2004. GTT1/StARD7, a novel phosphatidylcholine transfer protein-like highly expressed in gestational trophoblastic tumour: cloning and characterization. *Placenta* 25: 37-44.
3. Angeletti, S., Maggio, B. and Genti-Raimondi, S. 2004. Surface activity and interaction of StARD7 with phospholipid monolayers. *Biochem. Biophys. Res. Commun.* 314: 181-185.
4. Alpy, F. and Tomasetto, C. 2005. Give lipids a START: the StAR-related lipid transfer (START) domain in mammals. *J. Cell Sci.* 118: 2791-2801.
5. Soccio, R.E., Adams, R.M., Maxwell, K.N. and Breslow, J.L. 2005. Differential gene regulation of StarD4 and StarD5 cholesterol transfer proteins. Activation of StarD4 by sterol regulatory element-binding protein-2 and StarD5 by endoplasmic reticulum stress. *J. Biol. Chem.* 280: 19410-19418.
6. Olajoye, M.A., Vehring, S., Müller, P., Herrmann, A., Schiller, J., Thiele, C., Lindeman, G.J., Visvader, J.E. and Pomorski, T. 2005. StARD10, a START domain protein overexpressed in breast cancer, functions as a phospholipid transfer protein. *J. Biol. Chem.* 280: 27436-27442.
7. Tian, J., Zhang, S., Liu, Z., Zhuang, Y., Wang, Y. and Jiang, S. 2007. Characterization and tissue-specific expression of phosphatidylcholine transfer protein gene from amphioxus *Branchiostoma belcheri*. *Cell Tissue Res.* 330: 53-61.
8. Lee, H.S., Park, M.H., Yang, S.J., Park, K.C., Kim, N.S., Kim, Y.S., Kim, D.I., Yoo, H.S., Choi, E.J. and Yeom, Y.I. 2007. Novel candidate targets of Wnt/ β -catenin signaling in hepatoma cells. *Life Sci.* 80: 690-698.

CHROMOSOMAL LOCATION

Genetic locus: STARD7 (human) mapping to 2q11.2; Stard7 (mouse) mapping to 2 F1.

RESEARCH USE

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

SOURCE

StARD7 (K-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of StARD7 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-67856 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

StARD7 (K-20) is recommended for detection of StAR-related lipid transfer protein 7 of mouse, rat and 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).

StARD7 (K-20) is also recommended for detection of StAR-related lipid transfer protein 7 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for StARD7 siRNA (h): sc-63078, StARD7 siRNA (m): sc-63079, StARD7 shRNA Plasmid (h): sc-63078-SH, StARD7 shRNA Plasmid (m): sc-63079-SH, StARD7 shRNA (h) Lentiviral Particles: sc-63078-V and StARD7 shRNA (m) Lentiviral Particles: sc-63079-V.

Molecular Weight of StARD7: 35 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

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) 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.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.