

StARD4 (m): 293T Lysate: sc-123814

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. StARD4, StARD5 and StARD6 constitute one subfamily, sharing approximately 30% amino acid identity with each other. StARD6 is specifically expressed in the testis, while StARD4 and StARD5 are widely expressed with predominant expression in kidney and liver. These proteins are believed to function in the intracellular cytosolic transport of sterols and/or the biosynthesis of cholesterol. The expression of StARD4 can be regulated by sterols, whereas the expression of StARD5 is not sterol regulated but can be induced by endoplasmic reticulum (ER) stress. Due to its exclusive tissue expression and its interaction with sterols, StARD6 may function in reproduction and germ cell maturation.

REFERENCES

1. Soccio, R.E., et al. 2002. The cholesterol-regulated StARD4 gene encodes a StAR-related lipid transfer protein with two closely related homologues, StARD5 and StARD6. *Proc. Natl. Acad. Sci. USA* 99: 6943-6948.
2. 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.
3. Soccio, R.E., et al. 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.
4. Rodriguez-Agudo, D., et al. 2005. Human StARD5, a cytosolic StAR-related lipid binding protein. *J. Lipid Res.* 46: 1615-1623.
5. Ishikawa, T., et al. 2005. Sertoli cell expression of steroidogenic acute regulatory protein-related lipid transfer 1 and 5 domain-containing proteins and sterol regulatory element binding protein-1 are interleukin-1 β regulated by activation of c-Jun N-terminal kinase and cyclooxygenase-2 and cytokine induction. *Endocrinology* 146: 5100-5111.
6. Yamada, S., et al. 2006. Regulation of human StARD4 gene expression under endoplasmic reticulum stress. *Biochem. Biophys. Res. Commun.* 343: 1079-1085.

CHROMOSOMAL LOCATION

Genetic locus: Stard4 (mouse) mapping to 18 B1.

PRODUCT

StARD4 (m): 293T Lysate represents a lysate of mouse StARD4 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

StARD4 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive StARD4 antibodies. Recommended use: 10-20 μ l per lane.

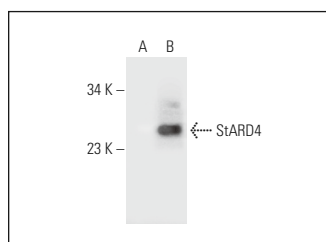
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

StARD4 (F-7): sc-390520 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse StARD4 expression in StARD4 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



StARD4 (F-7): sc-390520. Western blot analysis of StARD4 expression in non-transfected: sc-117752 (A) and mouse StARD4 transfected: sc-123814 (B) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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