

Spot 14 (h): 293T Lysate: sc-113757

BACKGROUND

Spot 14, also known as S14 or THRSP (thyroid hormone responsive protein), is a small acidic protein localizing to the nucleus and can be found in tissues that synthesize triglycerides, such as liver, mammary glands and adipose tissues. Spot 14 is implicated in growth and differentiation, possibly functioning as a transcription regulator for genes encoding proteins that participate in lipogenesis. A variety of lipogenic stimuli can activate the expression of Spot 14, including thyroid hormone, dietary carbohydrate, Insulin and glucose. Its expression can be downregulated by catecholamine and glucagon. In addition, Spot 14 expression is known to oscillate with the circadian clock. Knock-down of Spot 14 leads to impaired lipid synthesis and apoptosis. In most breast cancers, Spot 14 is overexpressed and is believed to augment cell growth and survival.

REFERENCES

1. Grillasca, J.P., et al. 1997. Cloning and initial characterization of human and mouse Spot 14 genes. *FEBS Lett.* 401: 38-42.
2. Cunningham, B.A., et al. 1998. "Spot 14" protein: a metabolic integrator in normal and neoplastic cells. *Thyroid* 8: 815-825.
3. Moncur, J.T., et al. 1998. The "Spot 14" gene resides on the telomeric end of the 11q13 amplicon and is expressed in lipogenic breast cancers: implications for control of tumor metabolism. *Proc. Natl. Acad. Sci. USA* 95: 6989-6994.
4. Compe, E., et al. 2001. Spot 14 protein interacts and cooperates with chicken ovalbumin upstream promoter-transcription factor 1 in the transcription of the L-type pyruvate kinase gene through a specificity protein 1 (Sp1) binding site. *Biochem. J.* 358: 175-183.
5. Sanchez-Rodriguez, J., et al. 2005. The Spot 14 protein inhibits growth and induces differentiation and cell death of human MCF7 breast cancer cells. *Biochem. J.* 390: 57-65.

CHROMOSOMAL LOCATION

Genetic locus: THRSP (human) mapping to 11q14.1.

PRODUCT

Spot 14 (h): 293T Lysate represents a lysate of human Spot 14 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

RESEARCH USE

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

APPLICATIONS

Spot 14 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Spot 14 antibodies. Recommended use: 10-20 µl per lane.

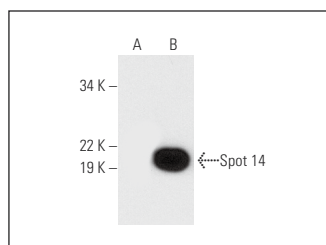
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Spot 14 (B-6): sc-390939 is recommended as a positive control antibody for Western Blot analysis of enhanced human Spot 14 expression in Spot 14 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

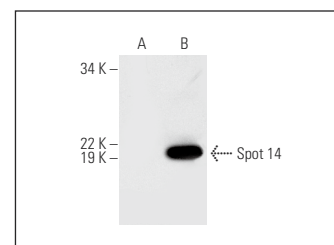
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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



Spot 14 (B-6): sc-390939. Western blot analysis of Spot 14 expression in non-transfected: sc-117752 (A) and human Spot 14 transfected: sc-113757 (B) 293T whole cell lysates.



Spot 14 (D-2): sc-390953. Western blot analysis of Spot 14 expression in non-transfected: sc-117752 (A) and human Spot 14 transfected: sc-113757 (B) 293T whole cell lysates.

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.

PROTOCOLS

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