

GW182 (h): 293T Lysate: sc-113721

BACKGROUND

GW bodies (GWBs) function as storage centers and degradation sites for mRNAs. GWBs are crucial intracellular structures for miRNA function. Disassembly or disruption of GWBs has been shown to impair siRNA and miRNA silencing activity. GW182 is a cytoplasmic marker protein for GWBs. GW182 autoantigen, also designated EMSY interactor protein, plays a role in the maintenance and stability of the GWB structures. GW182 is an ubiquitously expressed protein that binds to mRNA. The GW182 protein may interact with endogenous argonaute-2 (Ago2), which is also enriched in GWBs. The GW182 protein is detected in patients with ataxia, Sjogren's syndrome (SS) and sensor neuropathy disease, who develop autoantibodies against GWB structure proteins.

REFERENCES

1. Eystathiou, T., et al. 2002. A phosphorylated cytoplasmic autoantigen, GW182, associates with a unique population of human mRNAs within novel cytoplasmic speckles. *Mol. Biol. Cell* 13: 1338-1351.
2. Eystathiou, T., et al. 2003. Clinical and serological associations of autoantibodies to GW bodies and a novel cytoplasmic autoantigen GW182. *J. Mol. Med.* 81: 811-818.
3. Eystathiou, T., et al. 2003. The GW182 protein colocalizes with mRNA degradation associated proteins hDcp1 and hLSm4 in cytoplasmic GW bodies. *RNA* 9: 1171-1173.
4. Eystathiou, T., et al. 2003. A panel of monoclonal antibodies to cytoplasmic GW bodies and the mRNA binding protein GW182. *Hybrid. Hybridomics* 22: 79-86.
5. Yang, Z., et al. 2004. GW182 is critical for the stability of GW bodies expressed during the cell cycle and cell proliferation. *J. Cell Sci.* 117: 5567-5578.
6. Jakymiw, A., et al. 2005. Disruption of GW bodies impairs mammalian RNA interference. *Nat. Cell Biol.* 7: 1167-1174.
7. Rehwinkel, J., et al. 2005. A crucial role for GW182 and the Dcp1:Dcp2 decapping complex in miRNA-mediated gene silencing. *RNA* 11: 1640-1647.
8. Lian, S., et al. 2006. GW bodies, miRNAs and the cell cycle. *Cell Cycle* 5: 242-245.

CHROMOSOMAL LOCATION

Genetic locus: TNRC6A (human) mapping to 16p12.1.

PRODUCT

GW182 (h): 293T Lysate represents a lysate of human GW182 transfected 293T cells and is provided as 100 µg protein in 200 µl 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.

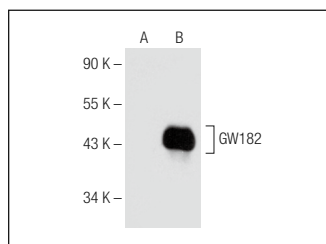
APPLICATIONS

GW182 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive GW182 antibodies. Recommended use: 10-20 µl per lane.

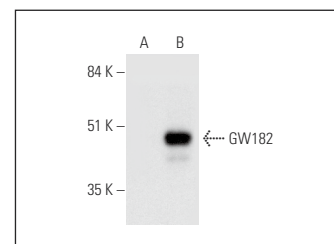
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

GW182 (G-10): sc-374459 is recommended as a positive control antibody for Western Blot analysis of enhanced human GW182 expression in GW182 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

DATA



GW182 (G-10): sc-374459. Western blot analysis of GW182 expression in non-transfected: sc-117752 (A) and human GW182 transfected: sc-113721 (B) 293T whole cell lysates.



GW182 (F-8): sc-514735. Western blot analysis of GW182 expression in non-transfected: sc-117752 (A) and human GW182 transfected: sc-113721 (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.