

GPT (h): 293T Lysate: sc-159764

BACKGROUND

The glutamate pyruvate transaminases GPT (or GPT1) and GPT2, also designated alanine aminotransferases (ALT1 and ALT2), respectively, catalyze the reversible transamination between alanine and 2-oxoglutarate to form pyruvate and glutamate. Subsequently, they play a key role in the intermediary metabolism of glucose and amino acids. GPT and GPT2 share significant sequence homology, but differ in their expression patterns. GPT exhibits high expression in kidney, liver and heart, whereas GPT2 expression is high in muscle, fat and kidney. GPT is widely used as an index of liver integrity or hepatocellular damage in clinical settings.

REFERENCES

1. Sohocki, M.M., Sullivan, L.S., Harrison, W.R., Sodergren, E.J., Elder, F.F., Weinstock, G., Tanase, S. and Daiger, S.P. 1997. Human glutamate pyruvate transaminase (GPT): localization to 8q24.3, cDNA and genomic sequences and polymorphic sites. *Genomics* 40: 247-252.
2. Yang, R.Z., Blaileanu, G., Hansen, B.C., Shuldiner, A.R. and Gong, D.W. 2002. cDNA cloning, genomic structure, chromosomal mapping and functional expression of a novel human alanine aminotransferase. *Genomics* 79: 445-450.
3. Matthews, C.C., Zielke, H.R., Parks, D.A. and Fishman, P.S. 2003. Glutamate-pyruvate transaminase protects against glutamate toxicity in hippocampal slices. *Brain Res.* 978: 59-64.
4. Jadhao, S.B., Yang, R.Z., Lin, Q., Hu, H., Anania, F.A., Shuldiner, A.R. and Gong, D.W. 2004. Murine alanine aminotransferase: cDNA cloning, functional expression and differential gene regulation in mouse fatty liver. *Hepatology* 39: 1297-1302.
5. Lagoa, C.E., Vodovotz, Y., Stolz, D.B., Lhuillier, F., McCloskey, C., Gallo, D., Yang, R., Ustinova, E., Fink, M.P., Billiar, T.R. and Mars, W.M. 2005. The role of hepatic type 1 plasminogen activator inhibitor (PAI-1) during murine hemorrhagic shock. *Hepatology* 42: 390-399.

CHROMOSOMAL LOCATION

Genetic locus: GPT (human) mapping to 8q24.3.

PRODUCT

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

APPLICATIONS

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

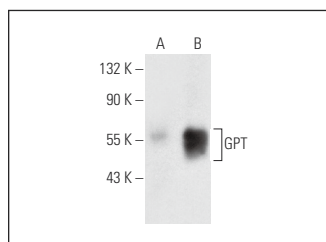
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

GPT (G-9): sc-271089 is recommended as a positive control antibody for Western Blot analysis of enhanced human GPT expression in GPT 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



GPT (G-9): sc-271089. Western blot analysis of GPT expression in non-transfected: sc-117752 (A) and human GPT transfected: sc-159764 (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.

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.