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## Produktinformation



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Diagnostik & molekulare Diagnostik



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### Lieferung & Zahlungsart

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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# SLA/LP (h): 293T Lysate: sc-177926

## BACKGROUND

The fidelity of protein synthesis requires efficient discrimination of amino acid substrates by aminoacyl-tRNA synthetases. Aminoacyl-tRNA synthetases function to catalyze the aminoacylation of tRNAs by their corresponding amino acids, thus linking amino acids with tRNA-contained nucleotide triplets. SLA/LP (soluble liver antigen/liver-pancreas antigen), also known as SEPSECS (Sep (O-phosphoserine) tRNA:Sec (selenocysteine) tRNA synthase) or SLA-p35, is a 501 amino acid cytoplasmic protein that belongs to a diverse family of pyridoxal phosphate-dependent enzymes. Expressed predominantly in liver, lung, kidney and pancreas, SLA/LP plays a role in aminoacyl-tRNA synthesis and, more specifically, selenoprotein biosynthesis. Using PLP as a cofactor, SLA/LP specifically converts O-phosphoseryl-tRNA(Sec) to Sec-tRNA(Sec) by exchanging the phosphate group for a selenol moiety. Due to alternative splicing events, two SLA/LP isoforms exist.

## REFERENCES

1. Costa, M., et al. 2000. Isolation and characterization of cDNA encoding the antigenic protein of the human tRNP(Ser)Sec complex recognized by autoantibodies from patients with type-1 autoimmune hepatitis. *Clin. Exp. Immunol.* 121: 364-374.
2. Volkman, M., et al. 2001. Soluble liver antigen: isolation of a 35-kd recombinant protein (SLA-p35) specifically recognizing sera from patients with autoimmune hepatitis. *Hepatology* 33: 591-596.
3. Xu, X.M., et al. 2005. Evidence for direct roles of two additional factors, SECp43 and soluble liver antigen, in the selenoprotein synthesis machinery. *J. Biol. Chem.* 280: 41568-41575.
4. Yuan, J., et al. 2006. RNA-dependent conversion of phosphoserine forms selenocysteine in eukaryotes and archaea. *Proc. Natl. Acad. Sci. USA* 103: 18923-18927.
5. Xu, X.M., et al. 2007. Biosynthesis of selenocysteine on its tRNA in eukaryotes. *PLoS Biol.* 5: e4.
6. Hauenstein, S.I., et al. 2008. Redundant synthesis of cysteinyl-tRNACys in *Methanosarcina mazei*. *J. Biol. Chem.* 283: 22007-22017.
7. Araiso, Y., et al. 2008. Structural insights into RNA-dependent eukaryal and archaeal selenocysteine formation. *Nucleic Acids Res.* 36: 1187-1199.
8. Sherrer, R.L., et al. 2008. Characterization and evolutionary history of an archaeal kinase involved in selenocysteinyl-tRNA formation. *Nucleic Acids Res.* 36: 1247-1259.
9. Sherrer, R.L., et al. 2008. Divergence of selenocysteine tRNA recognition by archaeal and eukaryotic O-phosphoseryl-tRNA<sup>Sec</sup> kinase. *Nucleic Acids Res.* 36: 1871-1880.

## CHROMOSOMAL LOCATION

Genetic locus: SEPSECS (human) mapping to 4p15.2.

## PRODUCT

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

## APPLICATIONS

SLA/LP (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive SLA/LP 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.

## 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](http://www.scbt.com) for detailed protocols and support products.