

# STYX (H-90): sc-292048

## BACKGROUND

STYX (serine/threonine/tyrosine-interacting protein), also known as protein tyrosine phosphatase-like protein, is a 223 amino acid protein that belongs to the protein-tyrosine phosphatase family and the non-receptor class sub-family. Although STYX contains a Gly residue instead of a conserved Cys residue in the dsPTPase catalytic loop which renders it catalytically inactive as a phosphatase, the binding pocket on STYX is sufficiently preserved to bind phosphorylated substrates and possibly protect them from phosphatases. STYX interacts with CARHSP1/CRHSP-24 and may play a role in spermiogenesis. The gene that encodes STYX contains 44,834 bases and maps to human chromosome 14, which houses over 700 genes and comprises nearly 3.5% of the human genome. Chromosome 14 encodes the presenilin 1 (PSEN1) gene, which is one of the three key genes associated with the development of Alzheimer's disease (AD). The SERPINA1 gene is also located on chromosome 14 and, when defective, leads to the genetic disorder  $\alpha$ -1-antitrypsin deficiency, which is characterized by severe lung complications and liver dysfunction.

## REFERENCES

1. Causer, D.A. 1975. The design of parallel hole  $\gamma$  camera collimators. *Int. J. Appl. Radiat. Isot.* 26: 355-362.
2. Wishart, M.J., et al. 1995. A single mutation converts a novel phosphotyrosine binding domain into a dual-specificity phosphatase. *J. Biol. Chem.* 270: 26782-26785.
3. Dayton, M.A., et al. 1997. Multiple phosphotyrosine phosphatase mRNAs are expressed in the human lung fibroblast cell line WI-38. *Recept. Signal Transduct.* 7: 241-256.
4. Wishart, M.J., et al. 1998. Gathering STYX: phosphatase-like form predicts functions for unique protein-interaction domains. *Trends Biochem. Sci.* 23: 301-306.
5. Juan, H.F., et al. 2006. Proteomics analysis of a novel compound: cyclic RGD in breast carcinoma cell line MCF-7. *Proteomics* 6: 2991-3000.
6. Kuzmin, A., et al. 2009. Identification of potentially damaging amino acid substitutions leading to human male infertility. *Biol. Reprod.* 81: 319-326.

## CHROMOSOMAL LOCATION

Genetic locus: STYX (human) mapping to 14q22.1; Styx (mouse) mapping to 14 C1.

## SOURCE

STYX (H-90) is a rabbit polyclonal antibody raised against amino acids 134-223 mapping at the C-terminus of STYX of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## RESEARCH USE

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

## APPLICATIONS

STYX (H-90) is recommended for detection of STYX of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

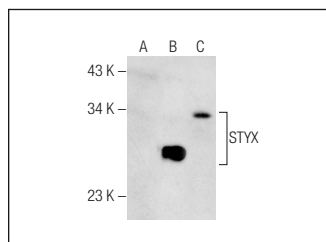
STYX (H-90) is also recommended for detection of STYX in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for STYX siRNA (h): sc-92405, STYX siRNA (m): sc-153912, STYX shRNA Plasmid (h): sc-92405-SH, STYX shRNA Plasmid (m): sc-153912-SH, STYX shRNA (h) Lentiviral Particles: sc-92405-V and STYX shRNA (m) Lentiviral Particles: sc-153912-V.

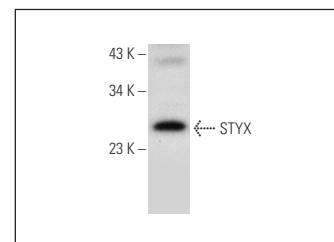
Molecular Weight of STYX: 25 kDa.

Positive Controls: STYX (m): 293T Lysate: sc-123828, WI 38 whole cell lysate: sc-364260 or SHP-77 whole cell lysate: sc-364258.

## DATA



STYX (H-90): sc-292048. Western blot analysis of STYX expression in non-transfected 293T: sc-117752 (A), mouse STYX transfected 293T: sc-123828 (B) and WI 38 (C) whole cell lysates.



STYX (H-90): sc-292048. Western blot analysis of STYX expression in SHP-77 whole cell lysate.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **STYX (D-12): sc-398023**, our highly recommended monoclonal alternative to STYX (H-90).