

STYX (D-12): sc-398023



The Power to Question

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 subfamily. Although STYX contains a Gly residue instead of a conserved Cys residue in the dsPTase 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 α 1-antitrypsin deficiency, which is characterized by severe lung complications and liver dysfunction.

REFERENCES

1. Causer, D.A. 1975. The design of parallel hole γ 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. and Dixon, J.E. 1998. Gathering STYX: phosphatase-like form predicts functions for unique protein-interaction domains. *Trends Biochem. Sci.* 23: 301-306.

CHROMOSOMAL LOCATION

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

SOURCE

STYX (D-12) is a mouse monoclonal antibody raised against amino acids 134-223 mapping at the C-terminus of STYX of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STYX (D-12) is available conjugated to agarose (sc-398023 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398023 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398023 PE), fluorescein (sc-398023 FITC), Alexa Fluor® 488 (sc-398023 AF488), Alexa Fluor® 546 (sc-398023 AF546), Alexa Fluor® 594 (sc-398023 AF594) or Alexa Fluor® 647 (sc-398023 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398023 AF680) or Alexa Fluor® 790 (sc-398023 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

STYX (D-12) is recommended for detection of STYX of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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).

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.

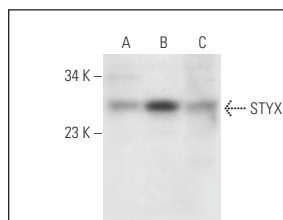
Molecular Weight of STYX: 25 kDa.

Positive Controls: STYX (h): 293T Lysate: sc-112261, WI-38 whole cell lysate: sc-364260 or SHP-77 whole cell lysate: sc-364258.

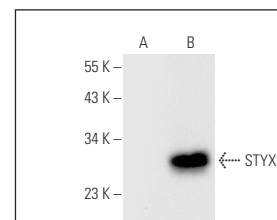
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



STYX (D-12): sc-398023. Western blot analysis of STYX expression in WI-38 (A) and SHP-77 (B) whole cell lysates and human lung tissue extract (C).



STYX (D-12): sc-398023. Western blot analysis of STYX expression in non-transfected: sc-117752 (A) and human STYX transfected: sc-112261 (B) 293T whole cell lysates.

STORAGE

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

RESEARCH USE

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

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