



ST8Sia IV (E-13): sc-109048

BACKGROUND

ST8Sia IV (ST8 α -N-acetyl-neuraminide α -2,8-sialyltransferase IV), also known as PST, PST1 or SIAT8D, is a 359 amino acid single-pass type II membrane protein that localizes to the membrane of the Golgi apparatus. Highly expressed in heart, thymus and spleen, as well as fetal lung, brain and kidney, ST8Sia IV functions to catalyze the polycondensation of α -2,8-linked sialic acid, an event that is required for the synthesis of polysialic acid (PSA). PSA is an important regulator of neuronal plasticity and is present in embryonic brain tissue, where it interacts with NCAM (neural cell adhesion molecule) and plays a crucial role in fetal brain development. Defects in the gene encoding ST8Sia IV are associated with idiopathic pancreatitis, schizophrenia and tumor formation/metastasis. ST8Sia IV exists as multiple isoforms produced by alternative splicing events.

REFERENCES

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3. Angata, K., Suzuki, M. and Fukuda, M. 2002. ST8Sia II and ST8Sia IV polysialyltransferases exhibit marked differences in utilizing various acceptors containing oligosialic acid and short polysialic acid. The basis for cooperative polysialylation by two enzymes. *J. Biol. Chem.* 277: 36808-36817.
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CHROMOSOMAL LOCATION

Genetic locus: ST8SIA4 (human) mapping to 5q21.1; St8sia4 (mouse) mapping to 1 D.

SOURCE

ST8Sia IV (E-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ST8Sia IV of human origin.

STORAGE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-109048 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ST8Sia IV (E-13) is recommended for detection of ST8Sia IV of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with other ST8Sia family members.

Suitable for use as control antibody for ST8Sia IV siRNA (h): sc-92058, ST8Sia IV siRNA (m): sc-153868, ST8Sia IV shRNA Plasmid (h): sc-92058-SH, ST8Sia IV shRNA Plasmid (m): sc-153868-SH, ST8Sia IV shRNA (h) Lentiviral Particles: sc-92058-V and ST8Sia IV shRNA (m) Lentiviral Particles: sc-153868-V.

Molecular Weight of ST8Sia IV: 46 kDa.

Positive Controls: mouse brain extract: sc-2253, mouse spleen extract: sc-2391 or rat spleen extract: sc-2397.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.