

# ST8Sia III (K-17): sc-85167

## BACKGROUND

ST8Sia III (ST8  $\alpha$ -N-acetyl-neuraminide  $\alpha$ -2,8-sialyltransferase 3), also known as SIAT8C, is a 380 amino acid single-pass type II membrane protein that localizes to the membrane of the Golgi apparatus. Expressed in fetal liver and fetal and adult brain, the expression of ST8Sia III is tissue-specific and developmentally regulated. ST8Sia III plays an important role in protein modification and glycosylation, and functions to catalyze the transfer of sialic acid through  $\alpha$ -2,8-linkage to intact fetuin glycoprotein. ST8Sia III can form polysialic acid (PSA) *in vitro* directly on  $\alpha$ -2,3-,  $\alpha$ -2,6- or  $\alpha$ -2,8-linked sialic acid. 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. The gene encoding ST8Sia III maps to human chromosome 18q21.31.

## REFERENCES

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- Kim, S.J., et al. 2006. Molecular mechanisms involved in transcriptional activation of the human Sia- $\alpha$ 2,3-Gal- $\beta$ 1,4-GlcNAc-R: $\alpha$ 2,8-sialyltransferase (hST8Sia III) gene induced by KCl in human glioblastoma cells. *Biochem. Biophys. Res. Commun.* 344: 1057-1064.
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## CHROMOSOMAL LOCATION

Genetic locus: ST8SIA3 (human) mapping to 18q21.31; St8sia3 (mouse) mapping to 18 E1.

## SOURCE

ST8Sia III (K-17) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of ST8Sia III of human origin.

## RESEARCH USE

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

## PRODUCT

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

Blocking peptide available for competition studies, sc-85167 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

ST8Sia III (K-17) is recommended for detection of ST8Sia III 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 ST8Sia II, ST8Sia IV, and ST8Sia V.

ST8Sia III (K-17) is also recommended for detection of ST8Sia III in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for ST8Sia III siRNA (h): sc-76580, ST8Sia III siRNA (m): sc-153867, ST8Sia III shRNA Plasmid (h): sc-76580-SH, ST8Sia III shRNA Plasmid (m): sc-153867-SH, ST8Sia III shRNA (h) Lentiviral Particles: sc-76580-V and ST8Sia III shRNA (m) Lentiviral Particles: sc-153867-V.

Molecular Weight of ST8Sia III: 44 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## 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.