

# HNK-1ST (N-14): sc-49035

## BACKGROUND

Sulfotransferase enzymes catalyze the sulfate conjugation of many hormones, neurotransmitters, drugs and xenobiotic compounds. These cytosolic enzymes differ in their tissue distributions and substrate specificities. HNK-1ST, also designated carbohydrate sulfotransferase 10 (CHST10), is a Golgi-associated sulfotransferase that functions in the biosynthesis of HNK-1, a neuronally expressed carbohydrate that harbors a sulfoglucuronyl residue. HNK-1ST and glucuronosyltransferase P (GLCATP) expression is necessary to form the HNK-1 carbohydrate epitope on NCAM, a cell adhesion molecule. HNK-1ST demonstrates prominent expression in adult and fetal brain and adult testis and ovary. The deduced 356 amino acid type II transmembrane protein contains 3 potential N-glycosylation sites and a conserved RDP sequence that is also present in other Golgi-resident sulfotransferases.

## REFERENCES

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2. Chou, D.K., Schachner, M. and Jungalwala, F.B. 2002. HNK-1 sulfotransferase null mice express glucuronyl glycoconjugates and show normal cerebellar granule neuron migration *in vivo* and *in vitro*. *J. Neurochem.* 82: 1239-1251.
3. Kang, H.G., Evers, M.R., Xia, G., Baenziger, J.U. and Schachner, M. 2002. Molecular cloning and characterization of chondroitin-4-O-sulfotransferase-3. A novel member of the HNK-1 family of sulfotransferases. *J. Biol. Chem.* 277: 34766-34772.
4. Senn, C., Kutsche, M., Saghatelian, A., Bösl, M.R., Löhler, J., Bartsch, U., Morellini, F. and Schachner, M. 2002. Mice deficient for the HNK-1 sulfotransferase show alterations in synaptic efficacy and spatial learning and memory. *Mol. Cell. Neurosci.* 20: 712-729.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 151290. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Kakuda, S., Oka, S. and Kawasaki, T. 2004. Mice deficient in the HNK-1 carbohydrate exhibit impaired learning and memory. *Tanpakushitsu Kakusan Koso* 49: 2431-2436.

## CHROMOSOMAL LOCATION

Genetic locus: CHST10 (human) mapping to 2q11.2; Chst10 (mouse) mapping to 1 B.

## SOURCE

HNK-1ST (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of HNK-1ST 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 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-49035 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

HNK-1ST (N-14) is recommended for detection of HNK-1ST of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 HNK-1ST siRNA (h): sc-60794, HNK-1ST siRNA (m): sc-60795, HNK-1ST shRNA Plasmid (h): sc-60794-SH, HNK-1ST shRNA Plasmid (m): sc-60795-SH, HNK-1ST shRNA (h) Lentiviral Particles: sc-60794-V and HNK-1ST shRNA (m) Lentiviral Particles: sc-60795-V.

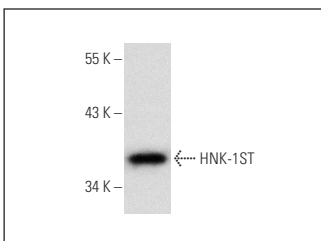
Molecular Weight of HNK-1ST: 42 kDa.

Positive Controls: MOLT-4 cell lysate: sc-2233, Ramos cell lysate: sc-2216 or SK-N-MC cell lysate: sc-2237.

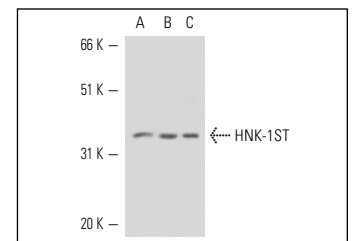
## RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



HNK-1ST (N-14): sc-49035. Western blot analysis of HNK-1ST expression in IMR-32 whole cell lysate.



HNK-1ST (N-14): sc-49035. Western blot analysis of HNK-1ST expression in MOLT-4 (A), Ramos (B) and SK-N-MC (C) whole cell lysates.

## RESEARCH USE

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