

Anti-GalNAc-T3 [UH5]

Catalogue number: 155106

Sub-type: Primary antibody

Images:

Contributor

Inventor:

Institute: University of Copenhagen

Images:

Tool details

***FOR RESEARCH USE ONLY**

Name: Anti-GalNAc-T3 [UH5]

Alternate name: UH5, 2D1

Class: Monoclonal

Conjugate: Unconjugated

Description: GalNAc-T3 is one of many polypeptide GalNAc-transferases that attach GalNAc to proteins forming the GalNAc-1-O-Ser/Thr linkage for GalNAc-type O-glycosylation. The GalNAc-transferase isoforms have considerably overlapping functions as well as unique distinct functions. GalNAc-T3 is differentially expressed in normal tissues e.g. pancreas, kidney, reproductive and gastrointestinal tracts. Genetic deficiency in GalNAc-T3 results in familial tumoral calcinosis and hyperostosis hyperphosphatemia syndrome due to lack of O-glycosylation of FGF23, which is a key regulator of serum phosphate homeostasis. GalNAc-T3 has also been implicated in spermatogenesis and carcinogenesis. O-glycans are important biomarkers in cancer. The truncated O-glycans comprising Tn formed by the GalNAc transferases and T formed by further elongation by the core1 synthase (C1GalT1) are widely recognized as pancarcinoma antigens. They are masked by sialic acid or further elongation or branching in normal cells. Validation: 1. Positive reaction (IC/IF) in cells expressing GalNAc-T3 using close isoforms as negative controls e.g. GalNAc-T6. 2. Selective IP of active GalNAc-T3 from total cell extracts. 3. Distinct perinuclear staining in cell lines (ICC/IF) and tissues (IHC, IF) suggestive of Golgi localization. 4. loss of staining (IC/IF) following KO of GalNAc-T3.

Purpose:

Parental cell:

Organism:

Tissue:

Model:

Gender:

Isotype: IgG1

Reactivity:

Human

Selectivity:

Host: Mouse

Immunogen: Catalytically active secreted GalNAc-T3 produced in insect cells. Recombinant protein containing aa. 52-633 (Uniprot isoform-1)

Immunogen UNIPROT ID: Q14435

Sequence:

Growth properties:

Production details:

Formulation:

Recommended controls:

Bacterial resistance:

Selectable markers:

Additional notes:

Target details

Target: GalNAc-T3/GALNT3

Target alternate names:

Target background: GalNAc-T3 is one of many polypeptide GalNAc-transferases that attach GalNAc to proteins forming the GalNAc1-O-Ser/Thr linkage for GalNAc-type O-glycosylation. The GalNAc-transferase isoforms have considerably overlapping functions as well as unique distinct functions. GalNAc-T3 is differentially expressed in normal tissues e.g. pancreas, kidney, reproductive and gastrointestinal tracts. Genetic deficiency in GalNAc-T3 results in familial tumoral calcinosis and hyperostosis hyperphosphatemia syndrome due to lack of O-glycosylation of FGF23, which is a key regulator of serum phosphate homeostasis. GalNAc-T3 has also been implicated in spermatogenesis and carcinogenesis. O-glycans are important biomarkers in cancer. The truncated O-glycans comprising Tn formed by the GalNAc transferases and T formed by further elongation by the core1 synthase (C1GalT1) are widely recognized as pancarcinoma antigens. They are masked by sialic acid or further elongation or branching in normal cells. Validation: 1. Positive reaction (IC/IF) in cells expressing GalNAc-T3 using close isoforms as negative controls e.g. GalNAc-T6. 2. Selective IP of active GalNAc-T3 from total cell extracts. 3. Distinct perinuclear staining in cell lines (ICC/IF) and tissues (IHC, IF) suggestive of Golgi localization. 4. loss of staining (IC/IF) following KO of GalNAc-T3.

Molecular weight:

Ic50:

Applications

Application: ELISA ; IHC ; IF ; IP

Application notes:

Handling

Format: Liquid

Concentration: 0.9-1.1 mg/ml

Passage number:

Growth medium:

Temperature:

Atmosphere:

Volume:

Storage medium:

Storage buffer: PBS with 0.02% azide

Storage conditions: -15° C to -25° C

Shipping conditions: Shipping at 4° C

Related tools

Related tools:

References

References: A validated collection of mouse monoclonal antibodies to human glycosyltransferases functioning in mucin-type O-glycosylation. ; Exploring Regulation of Protein O-Glycosylation in Isogenic Human HEK293 Cells by Differential O-Glycoproteomics. ; Loss of Function of GALNT2 Lowers High-Density Lipoproteins in Humans, Nonhuman Primates, and Rodents. ; Deconstruction of O-glycosylation--GalNAc-T isoforms direct distinct subsets of the O-glycoproteome. ; Control of mucin-type O-glycosylation: a classification of the polypeptide GalNAc-transferase gene family. ; Probing isoform-specific functions of polypeptide GalNAc-transferases using zinc finger nuclease glycoengineered SimpleCells. ; Mandel et al. 1999. Glycobiology. 9(1):43-52. PMID: 9884405. ; Localization of three human polypeptide GalNAc-transferases in HeLa cells suggests initiation of O-linked glycosylation throughout the Golgi apparatus.