

# GGTA1 (G-14): sc-241473

## BACKGROUND

GGTA1, also known as inactive N-acetyllactosaminide  $\alpha$ -1,3-galactosyltransferase, GGTA, GLYT2, GGTA1P or  $\alpha$ 1/3GTP, is a 100 amino acid single-pass type II membrane protein of the Golgi stack membrane. A member of the glycosyltransferase 6 family, GGTA1 is encoded by a gene that maps to human chromosome 9q33.2. Chromosome 9 houses over 900 genes and comprises nearly 4% of the human genome. Hereditary hemorrhagic telangiectasia, which is characterized by harmful vascular defects, and familial dysautonomia, are both associated with chromosome 9. Notably, chromosome 9 encompasses the largest interferon family gene cluster.

## REFERENCES

1. Joziassse, D.H., et al. 1989. Bovine  $\alpha$  1—3-galactosyltransferase: isolation and characterization of a cDNA clone. Identification of homologous sequences in human genomic DNA. *J. Biol. Chem.* 264: 14290-14297.
2. Joziassse, D.H., et al. 1991. Characterization of an  $\alpha$  1—3-galactosyltransferase homologue on human chromosome 12 that is organized as a processed pseudogene. *J. Biol. Chem.* 266: 6991-6998.
3. Joziassse, D.H., et al. 1991. Gene for murine  $\alpha$  1—3-galactosyltransferase is located in the centromeric region of chromosome 2. *Somat. Cell Mol. Genet.* 17: 201-205.
4. Shaper, N.L., et al. 1992. Assignment of two human  $\alpha$ -1,3-galactosyltransferase gene sequences (GGTA1 and GGTA1P) to chromosomes 9q33-q34 and 12q14-q15. *Genomics* 12: 613-615.
5. Lai, L., et al. 2002. Production of  $\alpha$ -1,3-galactosyltransferase knockout pigs by nuclear transfer cloning. *Science* 295: 1089-1092.
6. Phelps, C.J., et al. 2003. Production of  $\alpha$  1,3-galactosyltransferase-deficient pigs. *Science* 299: 411-414.
7. Cottin, V., et al. 2007. Pulmonary vascular manifestations of hereditary hemorrhagic telangiectasia (rendu-osler disease). *Respiration* 74: 361-378.
8. Zeitz, M.J., et al. 2009. Organization of the amplified type I interferon gene cluster and associated chromosome regions in the interphase nucleus of human osteosarcoma cells. *Chromosome Res.* 17: 305-319.
9. Axelrod, F.B., et al. 2010. Neuroimaging supports central pathology in familial dysautonomia. *J. Neurol.* 257: 198-206.

## CHROMOSOMAL LOCATION

Genetic locus: GGTA1P (human) mapping to 9q33.2.

## SOURCE

GGTA1 (G-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GGTA1 of human origin.

## 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-241473 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

GGTA1 (G-14) is recommended for detection of GGTA1 of 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).

Molecular Weight of GGTA1: 12 kDa.

## 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.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.