

Blood Group A antigen (HE-10): sc-59459

BACKGROUND

Blood-group antigens are generally defined as molecules formed by sequential addition of saccharides to the carbohydrate side chains of lipids and proteins detected on erythrocytes and certain epithelial cells. The A, B and H antigens are reported to undergo modulation during malignant cellular transformation. Blood group related antigens are usually mucin-type, and are detected on erythrocytes, certain epithelial cells, and in secretions of certain individuals. 16 genetically and biosynthetically distinct but inter-related specificities belong to this group of antigens, including A (1 and 2), B, H (1 and 2), M, N, Lewis A, Lewis B, Lewis X, Lewis Y, and precursor type 1 chain antigens.

REFERENCES

1. Race, C. and Watkins, W.M. 1974. Inhibition of the blood group A1 and A2 gene-specified N-acetyl- α -D-galactosaminyltransferases by uridine diphosphate D-galactose. *Carbohydr. Res.* 37: 239-244.
2. Donald, A.S. 1981. A-active trisaccharides isolated from A1 and A2 blood-group-specific glycoproteins. *Eur. J. Biochem.* 120: 243-249.
3. Donald, A.S. 1982. Trisaccharides from blood group A1 and A2 mucous glycoproteins. *Adv. Exp. Med. Biol.* 144: 49-51.
4. Staub Nielsen, L., et al. 1983. Another case of a lymphocytotoxic antibody with blood group A1 Leb and A Led associated specificity. *Tissue Antigens* 21: 177-183.
5. Clausen, H., et al. 1985. Repetitive A epitope (type 3 chain A) defined by blood group A1-specific monoclonal antibody TH-1: chemical basis of qualitative A1 and A2 distinction. *Proc. Natl. Acad. Sci. USA* 82: 1199-1203.
6. Julmy, F., et al. 2003. PLTs of blood group A1 donors express increased surface A antigen owing to apheresis and prolonged storage. *Transfusion* 43: 1378-1385.
7. Chung, W.Y., et al. 2005. Enhanced invasion of blood group A1 erythrocytes by *Plasmodium falciparum*. *Mol. Biochem. Parasitol.* 144: 128-130.
8. Breimer, M.E., et al. 2006. Blood group A and B antigen expression in human kidneys correlated to A1/A2/B, Lewis and secretor status. *Transplantation* 82: 479-485.
9. Samuelsson, B.E., et al. 2006. Structural characterization of blood group A glycolipids in blood group A liver tissue *in situ* perfused with O blood: the dominating presence of type 1 core chain A antigens. *Xenotransplantation* 13: 160-165.

CHROMOSOMAL LOCATION

Genetic locus: ABO (human) mapping to 9q34.2.

SOURCE

Blood Group A antigen (HE-10) is a mouse monoclonal antibody raised against a mixture of erythrocytes of blood group A1 and glycoprotein fraction isolated from the saliva of secretors with blood group A of human origin.

PRODUCT

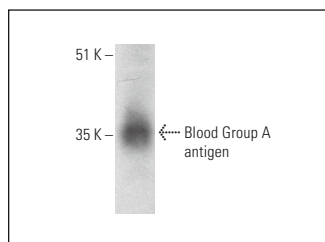
Each vial contains 500 μ l culture supernatant containing IgM with < 0.1% sodium azide.

APPLICATIONS

Blood Group A antigen (HE-10) is recommended for detection of Blood Group A antigen of human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:10-1:200), immunoprecipitation [10-20 μ l per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution to be determined by researcher, dilution range 1:10-1:200) and immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:10-1:200).

Positive Controls: human skin extract: sc-363777.

DATA



Blood Group A antigen (HE-10): sc-59459. Western blot analysis of Blood Group A antigen expression in human skin tissue extract.

SELECT PRODUCT CITATIONS

1. Costa, R., et al. 2017. Perturbations in cell signaling elicit early cardiac defects in mucopolysaccharidosis type II. *Hum. Mol. Genet.* 26: 1643-1655.
2. Costa, R., et al. 2020. A transcriptional and post-transcriptional dysregulation of dishevelled 1 and 2 underlies the Wnt signaling impairment in type I Gaucher disease experimental models. *Hum. Mol. Genet.* 29: 274-285.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

RESEARCH USE

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

PROTOCOLS

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