

**BABOON ANTI-GALACTOSE- $\alpha$ (1,3) GALACTOSE  
POLYCLONAL ANTIBODY****CATALOG NUMBER:** AB2052**LOT NUMBER:****QUANTITY:** 50  $\mu$ L**SPECIFICITY:** Galactose- $\alpha$ (1,3) galactose. This antibody is not known to react with other oligosaccharides. Staining is specific to only a very few endothelial cells. Contains antibodies to BSA.**BACKGROUND:** The use of porcine organs for xenotransplantation is the most attractive option to overcome the shortage of donor organs. However, the problem of acute rejection remains an unsolved barrier. Binding on xenoreactive natural antibodies, directed against the oligosaccharide Galactose- $\alpha$ (1,3) galactose (Gal  $\alpha$  (1,3) gal) on the endothelial surface of the xenograft, results in complement activation, recruitment of inflammatory mediators, promotion of a prothrombic state and eventually vascular strangulation and rejection. Until very recently, the existence of a Gal  $\alpha$  (1,3) gal independent pathway has not been conclusively demonstrated. However AB2052 will advance the xenotransplantation field by allowing the mechanism of xenotransplant rejection to be dissected into Gal  $\alpha$  (1,3) gal-dependent and independent components. The antibody has been developed by a novel linkage of the oligosaccharide to a spacer coupled with bovine serum albumin. The high titer and affinity makes the antibody suitable for immunohistochemical and biological inhibition studies. For example, addition of the antibody has been used to demonstrate direct and specific binding to the gal  $\alpha$  (1,3) epitope on the xenoendothelium. Further, the antibody has been used to establish gal  $\alpha$  (1,3) gal independent activation pathway. Calcium transients which arise in porcine endothelial cells following contact with human NK cells, can not be blocked by this antibody and is therefore gal  $\alpha$  (1,3) gal independent. AB2052 will be an essential tool in the study of human xenotransplantation.**IMMUNOGEN:** Porcine Gal  $\alpha$ (1,3) gal $\beta$ 1-4GlcNAc-BSA (14 atom spacer).**APPLICATIONS:** Western Blot: 1:200  
Immunohistochemistry: 1:500

Optimal working dilutions must be determined by end user.

**SPECIES REACTIVITIES:** Porcine and rat. Minor cross reactivity with human aortic and umbilical endothelial cells. Other species not yet tested.**FORMAT:** Baboon (*Papio hamadryas*) serum.**PRESENTATION:** Lyophilized. Contains no preservative. Reconstitute with 50  $\mu$ L of sterile distilled water. Centrifuge if necessary to remove any residue.

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**STORAGE/HANDLING:** Maintain lyophilized material at -20°C to -70°C for up to 6 months. After reconstitution maintain frozen at -20°C in undiluted aliquots for up to 6 months. Avoid repeated freeze/thaw cycles.

*For research use only; not for use as a diagnostic*

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