

PLATELET ANTIBODY SCREENING AND IDENTIFICATION

ELISA products designed to detect antibodies reactive with platelet glycoproteins

GENERAL INFORMATION

Platelets express glycoproteins (IIb/IIIa, Ib/IX, Ia/IIa, IV, and class I HLA) that are polymorphic and can become the targets for antibody responses. In a patient, these antibodies can cause the immune destruction of transfused platelets. Screening for and identifying these antibodies in patient sera offers the clinician the potential of better identifying compatible blood products and improving patient care. Using its patented technology (US Patents# 5,514,557 and 6,046,013), GTI Diagnostics has developed two product lines (PAK[®] and MACE[®]) which can be used to screen and identify platelet antibodies.

PAK PRODUCTS

The PAK[®] family of products provides well-characterized platelet glycoproteins immobilized either directly and/or captured by monoclonal antibodies to the wells of a microwell plate. The available formats allow a user to detect and differentiate between antibodies that bind to the platelet-specific glycoproteins (IIb/IIIa, Ib/IX, Ia/IIa, and IV) and Class I HLA. All GTI Diagnostics PAK[®] products are for In Vitro Diagnostic Use.

PAKPLUS[®]

Designed to identify antibodies to specific epitopes on the platelet glycoproteins IIb/IIIa and Ia/IIa, and to screen for antibodies to the platelet glycoproteins Ib/IX, IV and Class I HLA

PAKPLUS[®] Solid Phase ELISA provides monoclonal antibody-captured platelet glycoproteins IIb/IIIa and Ia/IIa obtained from group O donors of known platelet types. The platelet glycoproteins Ib/IX and IV, and Class I HLA are provided as affinity purified glycoproteins.

CATALOG NO:	SIZE:	AVG SHELF LIFE:	STORAGE:
PAKPLUS	Maximum 5 Tests/Kit	2 Years	2-8°C

PAK[®]12

Designed to identify IgG, A or M antibodies to specific epitopes on the platelet glycoproteins IIb/IIIa and Ia/IIa, and to screen for antibodies to the platelet glycoprotein Ib/IX and Class I HLA

PAK[®]12 Solid Phase ELISA provides monoclonal antibody-captured platelet glycoproteins IIb/IIIa and Ia/IIa obtained from group O donors of known platelet types. The platelet glycoprotein Ib/IX and Class I HLA are provided as affinity purified glycoproteins.

CATALOG NO:	SIZE:	AVG SHELF LIFE:	STORAGE:
PAK12	Maximum 5 Tests/Kit	2 Years	2-8°C

PAK[®]12G

Designed to identify IgG antibodies to specific epitopes on the platelet glycoproteins IIb/IIIa and Ia/IIa, and to screen for IgG antibodies to the platelet glycoprotein Ib/IX and Class I HLA

PAK[®]12G Solid Phase ELISA provides monoclonal antibody-captured platelet glycoproteins IIb/IIIa and Ia/IIa obtained from group O donors of known platelet types. The platelet glycoprotein Ib/IX and Class I HLA are provided as affinity purified glycoproteins.

CATALOG NO:	SIZE:	AVG SHELF LIFE:	STORAGE:
PAK12G	Maximum 5 Tests/Kit	2 Years	2-8°C



GTI. DIAGNOSTICS

Good science starts with people.™

PAK®2-LE

Designed to screen for IgG antibodies to the platelet glycoproteins IIb/IIIa, Ia/IIa, Ib/IX, and Class I HLA

PAK®2-LE Solid Phase ELISA provides monoclonal antibody-captured platelet glycoproteins IIb/IIIa and Ia/IIa obtained from group O donors of known platelet types. The platelet glycoprotein Ib/IX and Class I HLA are provided as affinity purified glycoproteins.

CATALOG NO:	SIZE:	AVG SHELF LIFE:	STORAGE:
PAK2-LE	Maximum 11 Tests/Kit	2 Years	2-8°C

PAK®1

Designed to detect antibodies reactive with specific epitopes on platelet glycoprotein IIb/IIIa

PAK®1 Solid Phase ELISA provides monoclonal antibody-captured platelet glycoprotein IIb/IIIa obtained from three group O donors of known platelet phenotypes.

CATALOG NO:	SIZE:	AVG SHELF LIFE:	STORAGE:
PAK1	Maximum 5 Tests/Kit	2 Years	2-8°C

MACE PRODUCTS

The MACE® products provide well-characterized monoclonal antibodies immobilized in the microwells which are used to capture the glycoproteins from platelets supplied by the user. The MACE® products allow a user to detect and differentiate between antibodies that bind to the platelet-specific glycoproteins (IIb/IIIa, Ib/IX, Ia/IIa, and IV) and Class I HLA. The MACE® kits provide a test that can be used for either antibody identification (if previously typed platelets are utilized) or a platelet crossmatch (if potential donor platelets are utilized). All GTI Diagnostics MACE® products are for In Vitro Diagnostic Use.

MACE®1

Designed to detect IgG antibodies to HLA Class I antigens and to epitopes on the platelet glycoprotein IIb/IIIa

MACE®1 Solid Phase ELISA provides immobilized monoclonal antibodies to capture HLA Class I or platelet IIb/IIIa glycoproteins.

CATALOG NO:	SIZE:	AVG SHELF LIFE:	STORAGE:
MACE1	Maximum 45 Tests/Kit	2 Years	2-8°C

MACE®2

Designed to detect IgG antibodies to epitopes on the platelet glycoproteins Ia/IIa, Ib/IX, and IV

MACE®2 Solid Phase ELISA provides immobilized monoclonal antibodies designed to capture platelet glycoproteins Ia/IIa, Ib/IX or IV.

CATALOG NO:	SIZE:	AVG SHELF LIFE:	STORAGE:
MACE2	Maximum 30 Tests/Kit	2 Years	2-8°C

REFERENCES

- Kunicki TJ, Aster RH. "Isolation and immunologic characterization of the human platelet isoantigen PI^(A1)." *Immunol* 1979, **16**: 353.
- Van der Schoot, et al. "Characterization of platelet-specific alloantigens by Immunoblotting: localization of Zw and Bak antigens." *Brit J Haemat* 1986, **64**: 715-723.
- Kuijpers RWAM, et al. "Localization of the platelet-specific Ko-system antigen Ko^a/Ko^b in GP Ib/IX." *Blood Suppl. I* 1989, **74**: 226a.
- Kieffer N, et al. "Immunochemical characterization of the platelet-specific alloantigen Lek^a, a comparative study with the PI^(A1) alloantigen." *Blood* 1984, **64**: 1212-1219.
- Furihata K, et al. "On the association of platelet-specific alloantigen with glycoprotein IIIa." *J Clin Invest* 1987, **80**: 1624-1630.
- Kiefel V, et al. "The Br(a)/Br(b) alloantigen systems on platelets." *Blood* 1989, **73**: 2219-2223.
- Ikeda et al. "A new platelet-specific antigen, Nak^a involved in the refractoriness of HLA-matched platelet transfusion." *Vox Sang* 1989, **57**: 213.
- Howard JE, Perkins HA. "The natural history of alloimmunization to platelets." *Transfusion* 1978, **18**: 496.
- Dutcher JP, Schiffer CA, Aisner J, Wiernick PH. "Alloimmunization following platelet transfusion: the absence of a dose-response relationship." *Blood* 1981, **57**: 395.
- Schiffer CA. "Clinical importance of antiplatelet antibody testing for the blood bank." A seminar on antigens on blood cells and body fluids. Washington DC: American Association of Blood Banks 1980, 189-208.
- Garratty G. "Review: Platelet immunology - similarities and differences with red cell immunology," *Immunohematology* 1995, **11 No 4**: 113-114.
- Friedman JM, Aster RH. "Neonatal alloimmune thrombocytopenic purpura and congenital porencephaly in two siblings associated with a "new" maternal antiplatelet antibody." *Blood* 1985, **65**: 1412.
- Furihata, K, Nugent DJ, Aster RH, Kunicki TJ. "Anti-Pen(a) binds specifically to an epitope on platelet glycoprotein IIIa." *Blood Suppl* 1986 (abstract), **68**: 107.
- Simon T, Collins J, Kunicki T, Furihata K, Smith K, Aster RH. "Post-transfusion pupura with antiplatelet antibody specific for the platelet antigen Pen^a." *Blood* 1986 (abstract), **68**: 117.
- Woods VL, Oh EH, Mason D, McMillan R. "Autoantibodies against the platelet glycoprotein IIb/IIIa complex in patients with chronic ITP." *Blood* 1984, **63**: 368.
- McMillan R, et al. *Blood* 1987, **70**: 1040-1045.

US Patent# 5,514,557, 6,046,013



GTI. DIAGNOSTICS

Good science starts with people.™

20925 Crossroads Circle, Suite 200
Waukesha, WI 53186 USA

IN USA 800. 233 . 1843
TEL 262 . 754 . 1000
FAX 262 . 754 . 9831
EMAIL gti@gtidiagnostics.com
WWW gtidiagnostics.com

DISTRIBUTED BY