

## Technical Data Sheet

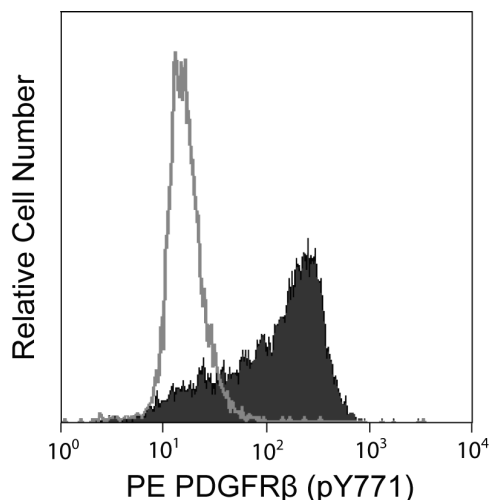
**PE Mouse anti-PDGFR $\beta$  (CD140b) (pY771)****Product Information**

<b>Material Number:</b>	558426
<b>Size:</b>	50 tests
<b>Vol. per Test:</b>	20 $\mu$ l
<b>Clone:</b>	J23-1044
<b>Immunogen:</b>	Phosphorylated Human PDGFR $\beta$ Peptide
<b>Isotype:</b>	Mouse IgG1, $\kappa$
<b>Reactivity:</b>	Tested: Mouse Predicted: Human
<b>Storage Buffer:</b>	Aqueous buffered solution containing BSA and $\leq 0.09\%$ sodium azide.

**Description**

Platelet-derived growth factor (PDGF) is a potent mitogen for cells of mesenchymal origin and exerts its effects by binding to the PDGF receptor (PDGFR), a transmembrane protein tyrosine kinase. PDGFR is composed of PDGFR $\alpha$  (CD140a) and/or PDGFR $\beta$  (CD140b) polypeptides. Both PDGF and PDGFR consist of subunits that form homo- or heterodimers with varying specificities: PDGF-AA binds only to  $\alpha\alpha$  PDGFR, PDGF-AB binds to both  $\alpha\alpha$  and  $\alpha\beta$  PDGFR, and PDGF-BB binds to all three PDGFRs. Ligand binding induces dimerization and activation of the receptor. Upon activation, CD140b is phosphorylated at multiple tyrosine sites and, in turn, an intracellular phosphorylation cascade is initiated. PDGFR localizes primarily to membrane invaginations termed caveolae, compartments that are enriched in several of its downstream effectors, including phosphatidylinositol 3'-kinase, Src, and phospholipase C- $\gamma$ .

The J23-1044 monoclonal antibody recognizes the phosphorylated tyrosine 771 (pY771) in the kinase insert domain of CD140b. pY771 interacts with GTPase-activating protein, a negative regulator of Ras, and weakly with Shc, which indirectly promotes the activation of Ras.



**Analysis of PDGFR $\beta$  (CD140b) (pY771) in mouse embryonic fibroblasts.** Serum-starved NIH/3T3 cells were either stimulated with PDGF-BB (Cat. No. 354051, shaded histogram) or unstimulated (open histogram). The cells were fixed (BD™ Phosflow Fix Buffer I, Cat. No. 557870) for 10 minutes at 37 °C, then permeabilized (BD™ Phosflow Perm Buffer III, Cat. No. 558050) on ice for at least 30 minutes, and then stained with PE anti-PDGFR $\beta$  (CD140b) (pY771). Flow cytometry was performed on a BD™ FACSCalibur flow cytometry system.

**Preparation and Storage**

The antibody was conjugated with R-PE under optimum conditions, and unconjugated antibody and free PE were removed. Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

**Application Notes****Application**

Intracellular staining (flow cytometry)	Tested
---	--------

**Product Notices**

- Please refer to [www.bdbiosciences.com/pharming/protocols](http://www.bdbiosciences.com/pharming/protocols) for technical protocols.
- This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use  $1 \times 10^6$  cells in a 100- $\mu$ l experimental sample (a test).

**BD Biosciences**

[bdbiosciences.com](http://bdbiosciences.com)

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	888.268.5430	32.53.720.550	0120.8555.90	65.6861.0633	0800.771.7157

For country-specific contact information, visit [bdbiosciences.com/how\\_to\\_order/](http://bdbiosciences.com/how_to_order/)

Conditions: The information disclosed herein is not to be construed as a recommendation to use the above product in violation of any patents. BD Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Purchase does not include or carry any right to resell or transfer this product either as a stand-alone product or as a component of another product. Any use of this product other than the permitted use without the express written authorization of Becton Dickinson and Company is strictly prohibited.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Not for resale.

BD, BD Logo and all other trademarks are the property of Becton, Dickinson and Company. ©2011 BD



3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

## References

- Claesson-Welsh L. Platelet-derived growth factor receptor signals. *J Biol Chem.* 1994; 269(51):32023-32026. (Biology)
- Ekman S, Kallin A, Engstrom U, Heldin CH, Ronnstrand L. SHP-2 is involved in heterodimer specific loss of phosphorylation of Tyr771 in the PDGF beta-receptor. *Oncogene.* 2002; 21(12):1870-1875. (Biology)
- Liu J, Oh P, Horner T, Rogers RA, Schnitzer JE. Organized endothelial cell surface signal transduction in caveolae distinct from glycosylphosphatidylinositol-anchored protein microdomains. *J Biol Chem.* 1997; 272(11):7211-7222. (Biology)