

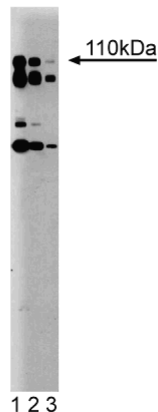
## Technical Data Sheet

**Purified Mouse Anti-PI3 Kinase p110δ****Product Information**

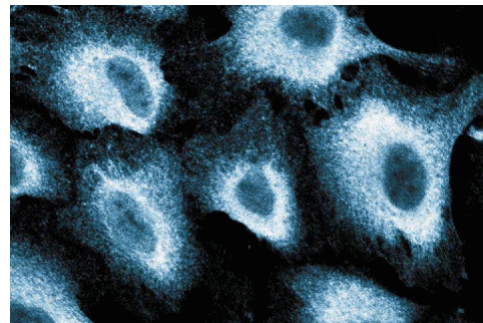
|                         |  |
|-------------------------|--|
| <b>Material Number:</b> | <b>611014</b>  |
| <b>Size:</b>            | 50 µg  |
| <b>Concentration:</b>   | 250 µg/ml  |
| <b>Clone:</b>           | 29/PI3 Kinase p110δ  |
| <b>Immunogen:</b>       | Mouse PI3 Kinase p110δ aa. 73-90   |
| <b>Isotype:</b>         | Mouse IgG1   |
| <b>Reactivity:</b>      | QC Testing: Rat<br>Tested in Development: Mouse                              |
| <b>Target MW:</b>       | 110 kDa  |
| <b>Storage Buffer:</b>  | Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide. |

**Description**

Phosphoinositide 3 Kinase (PI3 Kinase) phosphorylates the D-3 position of the inositol ring of phosphatidylinositol, producing PtdIns(3)P, PtdIns(3,4)P<sub>2</sub>, and PtdIns(3,4,5)P<sub>3</sub>. PI3-kinase is a heterodimer of an 85 kDa regulatory subunit (p85) containing two SH2 domains and an SH3 domain, and a 110 kDa catalytic subunit (p110). Four isoforms of p110 have been identified ( $\alpha$ ,  $\beta$ ,  $\gamma$ , and  $\delta$ ). The p110 $\alpha$ ,  $\beta$  isoforms are distributed ubiquitously. The p110 $\delta$  isoform is found exclusively in lymphocytes and lymphoid tissues. Lymphocytes also contains p110 $\alpha$  and both isoforms interact with p85 and are recruited to activated signaling complexes. However, several biochemical and structural differences distinguish p110 $\delta$ . Unlike p110 $\alpha$ , p110 $\delta$  autophosphorylates and does not phosphorylate p85. In addition, p110 $\delta$  contains a Pro-rich region, which endows it with the potential for interaction with SH3 domain-containing proteins, and a bZIP-like domain, which is a common transcription factor domain that has also been identified in certain protein kinases. With the established role of PI3-Ks in cytoskeletal rearrangements, it is thought that p110 $\delta$  contributes specifically to the regulation of lymphocytes extravasation into tissues. There is a high degree of homology in the immunogen region with the P110 $\beta$  form (77%), and it is likely that our antibody will detect both the beta and delta forms.



**Western blot analysis of PI3-Kinase p110δ on a rat cerebrum lysate.** Lane 1: 1:500, lane 2: 1:1000, lane 3: 1:2000 dilution of the mouse anti- PI3-Kinase p110δ antibody.



**Immunofluorescence staining of human endothelial cells.**

**Preparation and Storage**

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. Store undiluted at -20°C.

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## Application Notes

### Application

|                    |                           |
|--------------------|---------------------------|
| Western blot       | Routinely Tested          |
| Immunofluorescence | Tested During Development |

### Recommended Assay Procedure:

**Western blot:** Please refer to [http://www.bdbiosciences.com/pharmingen/protocols/Western\\_Blotting.shtml](http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml)

### Suggested Companion Products

| Catalog Number | Name                    | Size   | Clone      |
|----------------|-------------------------|--------|------------|
| 611463         | Rat Cerebrum Lysate     | 500 µg | (none)     |
| 554002         | HRP Goat Anti-Mouse Ig  | 1.0 ml | (none)     |
| 554001         | FITC Goat Anti-Mouse Ig | 0.5 mg | Polyclonal |

### Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to [www.bdbiosciences.com/pharmingen/protocols](http://www.bdbiosciences.com/pharmingen/protocols) for technical protocols.
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

Chantry D, Vojtek A, Kashishian A, et al. p110delta, a novel phosphatidylinositol 3-kinase catalytic subunit that associates with p85 and is expressed predominantly in leukocytes. *J Biol Chem.* 1997; 272(31):19236-19241.(Biology)