

## Product Information

### Anti-Par6 $\beta$

produced in rabbit, affinity isolated antibody

Catalog Number **B8062**

### Product Description

Anti-Par6 $\beta$  is produced in rabbit using as immunogen a synthetic peptide corresponding to amino acids 275-289 of human Par6 $\beta$  (GeneID: 84612) conjugated to KLH. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Par6 $\beta$  recognizes human Par6 $\beta$  (also known as PAR-6B). The antibody may be used in several immunochemical techniques including immunoblotting (~48 kDa), immunoprecipitation and immunofluorescence. Detection of the Par6 $\beta$  band by immunoblotting is specifically inhibited with the immunizing peptide.

The establishment and maintenance of cell polarity is critical for the morphogenesis of multicellular organisms in which polarity is obtained by asymmetric cell division. The exact mechanisms involved in polarity formation are not fully known, but accumulating evidence supports a fundamental role in this process for proteins of the Par6 family. The polarity complex is an evolutionarily conserved protein complex composed of Par6, Par3, and atypical PKC (aPKC),<sup>1</sup> that functions in different cell polarization events in a wide range of species from worms to mammals. The organization of the Par complex has been analyzed primarily in mammalian cells. Mouse Par6 (mPar6) has a central scaffolding and regulatory function through its interactions with mPar3, aPKC and the Cdc42 GTPase. The amino terminus of mPar6 contains a motif within a PB1 domain that heterodimerizes with a complementary PB1 domain in the non-catalytic N-terminal region of aPKC. The mPar6 PB1 domain is followed by a CRIB motif, which engages the GTP-bound form of the Cdc42 GTPase.<sup>2,3</sup> On the carboxy-terminal side of the CRIB motif, Par6 has a PDZ domain that interacts with the N-terminal PDZ domain of mPar3.<sup>4</sup>

Mammalian genomes contain three Par6 homologues (designated in humans Par6  $\alpha$ ,  $\beta$ , and  $\gamma$ ). All three Par6 proteins are structurally similar, but seem to have different tissue expression patterns and subcellular distribution.<sup>5,6</sup>

### Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~1.0 mg/mL

### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

### Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots at -20 °C. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

### Product Profile

**Immunoblotting:** a working antibody concentration of 0.5-1  $\mu$ g/mL is recommended using lysates of MDCK cells.

**Immunoprecipitation:** a working antibody amount of 2-5  $\mu$ g is recommended using MDCK cell lysate.

**Immunofluorescence:** a working antibody concentration of 2-5  $\mu$ g/mL is recommended using paraformaldehyde fixed MDCK cells.

**Note:** In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

## References

1. Watts, J.L., et al., *Development*, **122**, 3133-3140 (1996).
2. Lin, D., et al., *Nat. Cell Biol.*, **2**, 540-547 (2000).
3. Macara, I.G., *Nat. Rev. Mol. Biol.*, **5**, 220-231 (2004).
4. Joberty, G.C., et al., *Nat. Cell Biol.*, **2**, 531-539 (2000).
5. Massey-Harroche, D., et al., *Biochim. Biophys. Acta*, **1778**, 614-630 (2008).
6. Vinot, S., et al., *Dev. Biol.*, **282**, 307-319 (2005).

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