

## Product Information

### Anti-PICK1 (C-terminal)

produced in rabbit, IgG fraction of antiserum

Catalog Number **SAB4200463**

#### Product Description

Anti-PICK1 (C-terminal) is produced in rabbit using as immunogen a synthetic peptide corresponding to a sequence at the C-terminus of rat PICK1 (GenelD 84591), conjugated to KLH. The corresponding sequence is highly conserved in mouse PICK1 (single amino acid substitution) and in human PICK1 (83% sequence identity). Whole antiserum is purified using protein A immobilized on agarose to provide the IgG fraction of antiserum.

Anti-PICK1 (C-terminal) specifically recognizes human, rat and mouse PICK1. The antibody can be used in various immunochemical techniques including immunoblotting (rat, mouse PICK1 ~47 kDa, human PICK1 ~55 kDa). Detection of the PICK1 band by immunoblotting is specifically inhibited by the PICK1 immunizing peptide.

PICK1 (protein interacting with C kinase 1), is a PDZ- and BAR-domain containing protein that plays a key role in several physiological processes, including synaptic plasticity.<sup>1,2</sup> PICK1 is expressed at high levels in the brain and is located at the perinuclear region as well as synapses of neurons. PICK1 is phosphorylated in response to PKC $\alpha$  activation. The PDZ domain of PICK1 has been shown to bind to a large number of membrane proteins, including the glutamate receptors subunits AMPAR, mGLUR7a, and the Eph receptors, to regulate their subcellular localization.<sup>3-5</sup> The BAR domain binds to lipids, mainly phosphoinositides, which are important for PICK1 regulation and synaptic targeting, and for trafficking of AMPAR receptors. Mutations in the PICK1 PDZ domain inhibit the binding of PICK1 to PKC $\alpha$ . PICK1 has been shown to bind F-actin and Arp2/3 complex and to inhibit Arp2/3-mediated actin polymerization.<sup>6</sup> PICK1 binds directly the human memory associated protein KIBRA to form a complex with AMPAR.<sup>7</sup> It has been suggested that PICK1 plays a central role in specific a form of vesicular trafficking, modulation of presynaptic glutamate neurotransmission by targeting and anchoring glutamate receptors to specific synapses and synaptic plasticity.

#### Reagent

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

#### 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. 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 dilution of 1:2,000-1:4,000 is recommended using rat brain extracts (S1 fraction), mouse brain extracts (S1 fraction) and lysates of HEK-293T cells overexpressing human PICK1.

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

#### References

1. Hanley, J.G., *Pharmacol. Ther.*, **118**, 152-160 (2008).
2. Xu, J., and Xia, J., *Neurosignals*, **15**, 190-201 (2006).
3. Boudin, H., et al., *Neuron*, **28**, 485-497 (2000).
4. Jin, W., et al., *J. Neurosci.*, **26**, 2380-2390 (2006).
5. Xu, N.J., et al., *Nat. Neurosci.*, **14**, 1421-1429 (2011).
6. Rocca, D.L., et al., *Nature Cell Biol.*, **10**, 259-271 (2008).
7. Makuch, L., et al., *Neuron*, **71**, 1022-1029 (2011).

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