

## SBA Clonotyping System-C57BL/6-AP

Cat. No.	Kit Format	Size
5300-04B	Alkaline Phosphatase (AP)	1.0 mL each

### Description

The SBA Clonotyping System-C57BL/6-AP kit is designed for the isotyping of C57BL/6 mouse monoclonal antibodies. It contains 2.5 mg of capture antibody and 1.0 mL of AP conjugated anti-mouse Ig, mouse IgA, mouse IgG<sub>1</sub>, mouse IgG<sub>2b</sub>, mouse IgG<sub>2c</sub>, mouse IgG<sub>3</sub>, mouse IgM, mouse  $\kappa$ , mouse  $\lambda$ , and pNPP substrate. The kit may also be utilized for quantitative studies of mouse immunoglobulins in samples such as serum, supernatant, and ascites when used in conjunction with the C57BL/6 Mouse Immunoglobulin Panel (SB Cat. No. 5300-01B).

### Applications

ELISA – Quality tested <sup>1-4</sup>

### Kit Components

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| <ul style="list-style-type: none"> <li>Goat Anti-Mouse Ig, Human ads-UNLB</li> <li>Goat Anti-Mouse Ig, Human ads-AP</li> <li>Goat Anti-Mouse IgA-AP</li> <li>Goat Anti-Mouse IgG<sub>1</sub>, Human ads-AP</li> <li>Goat Anti-Mouse IgG<sub>2b</sub>, Human ads-AP</li> <li>Goat Anti-Mouse IgG<sub>2c</sub>, Human ads-AP</li> </ul> | <ul style="list-style-type: none"> <li>Goat Anti-Mouse IgG<sub>3</sub>, Human ads-AP</li> <li>Goat Anti-Mouse IgM, Human ads-AP</li> <li>Goat Anti-Mouse Kappa-AP</li> <li>Goat Anti-Mouse Lambda-AP</li> <li>pNPP Substrate Tablets</li> </ul> |
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### Handling and Storage

- The purified (UNLB) antibody is supplied as 2.5 mg purified immunoglobulin in 1.0 mL of borate buffered saline, pH 8.2. *No preservatives or amine-containing buffer salts added.* Store at 2-8°C.
- The alkaline phosphatase (AP) conjugates are supplied as 1.0 mL of stock solution in 50 mM Tris/1 mM MgCl<sub>2</sub>/50% glycerol, pH 8.0, containing NaN<sub>3</sub> as preservative. Store at 2-8°C or long-term at -20°C.
- The pNPP substrate tablets are supplied as 20 x 5 mg. Store at 2-8°C. Protect from light.
- Reagents are stable for the period shown on the label if stored as directed.

### Warning

Some reagents contain sodium azide. Please refer to product specific (M)SDS.

### Suggested Isotyping Protocol

- Dilute capture antibody to a concentration of 5 - 10 µg/mL in borate buffered saline (BBS), pH 8.2 or phosphate buffered saline (PBS), pH 7.4; add 0.1 mL to each well of the ELISA plate; alternatively, the antigen used for immunization may be used as the coating reagent
- Cover plate with a lid or plastic wrap and incubate in a humidified atmosphere at 2-8°C for a minimum of 12 hours
- Empty wells, wash 3X with BBS (or PBS) containing 0.05% Tween®, empty wells, and fill wells with BBS (or PBS) containing 1% bovine serum albumin (BBS/BSA)
- Allow antibody-coated plate to stand at room temperature for a minimum of 1 hour to block free binding sites on the plate
- Empty plate and wash 3X
- Add 0.1 mL of hybridoma supernatant to each well, cover plate, and incubate for 1 hour at room temperature with gentle shaking or overnight at 2-8°C
- Empty plate and wash 3X
- Dilute AP-labeled detection antibody(ies) 1:250 – 1:500 in BBS/BSA, add 0.1 mL conjugate(s) to appropriate wells of the plate, cover plate, and incubate for 1 hour at room temperature with gentle shaking or overnight at 2-8°C
- Empty the plate and wash 5X
- Prepare substrate buffer - To 400 mL of double glass-distilled water, add 24.5 mg MgCl<sub>2</sub>·6H<sub>2</sub>O and 48 mL diethanolamine; adjust pH to 9.8 with 5N HCl and make up to 500 mL with distilled water
- Prepare a 1 mg/mL substrate solution (e.g., one 5 mg tablet + 5 mL substrate buffer) and add 0.1 mL to each well of the plate
- Read optical density of each well at 405 nm after substrate addition

**For Research Use Only. Not for Diagnostic or Therapeutic Use.**

## References

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1. Dubovsky JA, Beckwith KA, Natarajan G, Woyach JA, Jaglowski S, Zhong Y, et al. Ibrutinib is an irreversible molecular inhibitor of ITK driving a Th1-selective pressure in T lymphocytes. *Blood*. 2013;122:2539-49. (ELISA - Serum)
2. Hwang I, Park C, Luong T, Harrison KA, Birnbaumer L, Kehrl JH. The loss of Gnai2 and Gnai3 in B cells eliminates B lymphocyte compartments and leads to a hyper-IgM like syndrome. *PLoS One*. 2013;8(8):e72596. (ELISA - Serum)
3. Park KS, Bayles I, Sziachta-McGinn A, Paul J, Boiko J, Santos P, et al. Transcription elongation factor ELL2 drives Ig secretory-specific mRNA production and the unfolded protein response. *J Immunol*. 2014;193:4663-74. (ELISA - Serum)
4. Hwang I, Park C, Harrison K, Boullaran C, Galés C, Kehrl JH. An essential role for RGS protein/Gα<sub>12</sub> interactions in B lymphocyte-directed cell migration and trafficking. *J Immunol*. 2015;194:2128-39. (ELISA - Serum)

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