

## Product Information

### Monoclonal Anti- $\alpha$ -Amylase 1A, antibody produced in mouse

clone AMY-7, purified from hybridoma cell culture

Catalog Number **SAB4200673**

#### Product Description

Monoclonal Anti- $\alpha$ -Amylase 1A (mouse IgG1 isotype) is derived from the hybridoma AMY-7 produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with an N-terminal His-tagged recombinant human  $\alpha$ -Amylase 1A (GeneID: 276). The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents, Product Number ISO2. The antibody is purified from culture supernatant of hybridoma cells.

Anti- $\alpha$ -Amylase 1A recognizes human, mouse and rat AMY1A. The antibody may be used in various immunochemical techniques including immunoblotting (~58 kDa) and immunohistochemistry. Detection of the AMY1A band by immunoblotting is specifically inhibited by the immunogen.

$\alpha$ -Amylase 1A, also known as AMY1A, Amy-1-a or 1,4-alpha-D-glucan glucanohydrolase 1a, belongs to the  $\alpha$ -Amylase family. AMY1A is a secreted digestive enzyme produced by the salivary glands and pancreas. This enzyme cleaves the glycosidic linkages in starch molecules to produce smaller saccharides such as maltotriose, maltose, and small amounts of glucose.<sup>1</sup> AMY1A is expressed in high levels in either salivary gland or pancreas cells, however protein levels may dramatically vary depending on patients' diet and environment conditions as well as genetic factors.<sup>2</sup> AMY1A has been identified as an indicator in pancreas and salivary gland diseases, as well as lung cancer, ovarian cancer, plasmacytoma and thyroid adenomas.<sup>3-4</sup> In addition, members of the  $\alpha$ -Amylase family are used as targets for drug design in attempts to treat diabetes, obesity, hyperlipemia and caries.<sup>5-6</sup>

#### Reagent

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

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 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 is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

#### Product Profile

**Immunoblotting:** a working concentration of 0.25-0.5  $\mu$ g/mL is recommended using rat pancreas tissue extracts.

**Immunohistochemistry:** a working concentration of 5-10  $\mu$ g/mL is recommended using heat-retrieved formalin-fixed, paraffin-embedded human pancreas sections.

**Note:** In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

#### References

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3. Jain, S., et al., *Am. J. Surg. Pathol.*, **37**, 1824-1830 (2013).
4. Doi, S., et al., *Cancer Res.*, **51**, 3544-3549 (1991).
5. Ramasubbu, N., et al., *Acta Crystallogr. D*, **52**, 435-446 (1996).
6. Kandra, L., et al., *FEBS Lett.*, **544**, 194-198 (2003).

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