

# PRODUCT INFORMATION



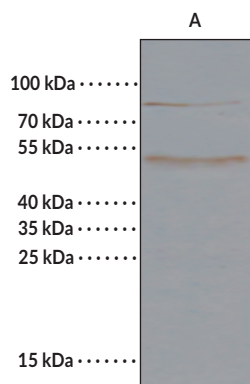
## $\alpha$ -Galactosidase A Rabbit Monoclonal Antibody (Clone 001)

Item No. 38088

### Overview and Properties

<b>Contents:</b>	This vial contains 50 or 100 $\mu$ l of protein A-affinity purified monoclonal antibody.
<b>Synonyms:</b>	$\alpha$ -D-Galactoside Galactohydrolase, Galactosylgalactosylglucosylceramidase, GLA
<b>Immunogen:</b>	Recombinant human $\alpha$ -galactosidase A
<b>Cross Reactivity:</b>	(+) $\alpha$ -Galactosidase A
<b>Species Reactivity:</b>	(+) Human
<b>Form:</b>	Liquid
<b>Storage:</b>	-80°C (as supplied)
<b>Stability:</b>	$\geq$ 1 year
<b>Storage Buffer:</b>	0.2 $\mu$ m filtered solution in PBS
<b>Clone:</b>	001
<b>Host:</b>	Rabbit
<b>Isotype:</b>	IgG
<b>Applications:</b>	ELISA and immunoprecipitation (IP); the recommended starting dilution is 1:5,000-1:10,000 for ELISA and 4-6 $\mu$ l/mg of lysate for IP. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

### Image



Lane 1: 0.5 mg MCF-7 whole cell lysate immunoprecipitated using 2  $\mu$ l  $\alpha$ -Galactosidase A Rabbit Monoclonal Antibody and 15  $\mu$ l of 50% protein G agarose

Western blot using  $\alpha$ -Galactosidase A Rabbit Monoclonal Antibody (Clone 001) at a 1:1,000 dilution.

WARNING  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY  
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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## Description

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$\alpha$ -Galactosidase A is an acidic hydrolase that catalyzes the removal of terminal  $\alpha$ -glucosidase groups from glycoproteins and glycolipids.<sup>3,4</sup> It is ubiquitously expressed and functions as a homodimer with each monomer containing an N-terminal  $\alpha(\beta/\alpha)8$  domain and a C-terminal anti-parallel  $\beta$  domain.<sup>1,4</sup> Mutations in *GLA*, the gene encoding  $\alpha$ -galactosidase A, induce lysosomal  $\alpha$ -glucosidase A deficiencies, which cause Fabry disease, an X-linked lysosomal storage disorder characterized by hypohidrosis and heat intolerance, as well as cardiac, CNS, and vascular dysfunction.<sup>3,5</sup>  $\alpha$ -Galactosidase A activity is decreased in dried blood spots from patients with Parkinson's disease but not harboring the Parkinson's disease-associated mutations in *LRRK2*, *LRRK2*<sup>G2019S</sup>, or in glucocerebrosidase.<sup>2</sup> Cayman's  $\alpha$ -Galactosidase A Rabbit Monoclonal Antibody (Clone 001) can be used for ELISA and immunoprecipitation (IP) applications.

## References

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1. Fitzmaurice, T.F., Desnick, R.J., and Bishop, D.F. Human  $\alpha$ -galactosidase A: High plasma activity expressed by the -30G $\rightarrow$ A allele. *J. Inherit. Metab. Dis.* **20**(5), 643-657 (1997).
2. Alcalay, R.N., Wolf, P., Levy, O.A., et al. Alpha galactosidase A activity in Parkinson's disease. *Neurobiol. Dis.* **112**, 85-90 (2018).
3. Dwyer, B., Hu, J., Madduri, A., et al. Affinity purification of human alpha galactosidase utilizing a novel small molecule biomimetic of alpha-D-galactose. *Protein Expr. Purif.* **177**, 105752 (2021).
4. Garman, S.C. Structure-function relationships in  $\alpha$ -galactosidase A. *Acta Paediatr.* **96**(455), 6-16 (2007).
5. Mahmud, H.M. Fabry's disease — a comprehensive review on pathogenesis, diagnosis and treatment. *J. Pak. Med. Assoc.* **64**(2), 189-194 (2014).

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