# PRODUCT INFORMATION

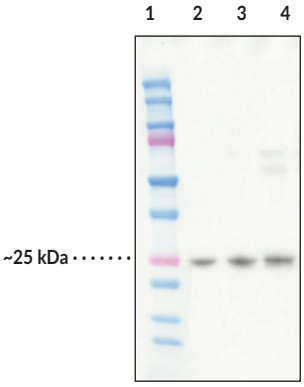
## ApoA1 Monoclonal Antibody (Clone CC3821C4)

*Item No. 13042*

### Overview and Properties

| | |
|---|---|
| **Contents:** | This vial contains Protein G-purified monoclonal antibody. |
| **Synonym:** | Apolipoprotein A1 |
| **Immunogen:** | Synthetic peptide from the internal region of human ApoA1 |
| **Cross Reactivity:** | (-) ApoB |
| **Species Reactivity:** | (+) Human ApoA1 |
| **Uniprot No.:** | P02647 |
| **Form:** | Lyophilized |
| **Storage:** | -20°C (as supplied) |
| **Stability:** | ≥3 years |
| **Storage Buffer:** | PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide |
| **Clone:** | CC3821C4 |
| **Host:** | Mouse |
| **Isotype:** | IgG1 |
| **Applications:** | Western blot (WB); the recommended starting dilution for WB is 1:1,000. Other applications were not attempted and therefore optimal working dilutions should be determined empirically. |

### Image




**Lane 1:** MW Markers
**Lane 2:** ApoA1 WRC (1 µl)
**Lane 3:** ApoA1 WRC (2 µl)
**Lane 4:** Human plasma (25 µg)



CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

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## Description

ApoA1 is a major protein component in high-density lipoproteins (HDLs). It acts as an acceptor for sequential transfers of phospholipids and free cholesterol from peripheral tissues and transports cholesterol to the liver and other tissues for excretion and steroidogenesis.[1] Serum ApoA1 levels are inversely related to the risk of developing atherosclerosis.[2] Loss-of-function mutations are causes of diseases such as HDL deficiency type 1 (or Tangier disease) and type 2 (familial hypoalphalipoproteinemia), and systemic non-neuropathic amyloidosis.[3,4] Liver and small intestine are two main sources of the protein.

ApoA1 is comprised of a single polypeptide chain of 243 amino acid residues with an estimated molecular weight of 28 kDa. Cayman's ApoA1 Monoclonal Antibody detects the protein from diluted human plasma (≤10 µg total protein) by western blotting. Western blotting of recombinant ApoA1 samples suggest a detection limit of 5 ng.

## References


1. Ajees, A.A., Anantharamaiah, G.M., Mishra, V.K., *et al.* Crystal structure of human apolipoprotein A-I: Insights into its protective effect against cardiovascular diseases. *Proc. Natl. Acad. Sci. USA* **103(7)**, 2126-2131 (2006).
2. Haas, M.J., Reinacher, D., Li, J.P., *et al.* Regulation of apoA1 gene expression with acidosis: Requirement for a transcriptional repressor. *J. Mol. Endocrinol.* **27(1)**, 43-57 (2001).
3. Tall, A.R. and Wang, N. Tangier disease as a test of the reverse cholesterol transport hypothesis. *J. Clin. Invest.* **106(10)**, 1205-1207 (2000).
4. Cheung, M.C., Mendez, A.J., Wolf, A.C., *et al.* Characterization of apolipoprotein A-I- and A-II-containing lipoproteins in a new case of high density lipoprotein deficiency resembling tangier disease and their effects on intracellular cholesterol efflux. *J. Clin. Invest.* **91(2)**, 522-529 (1993).



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