

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Apolipoprotein A-IV/ApoA4 in direct ELISAs.
Source	Monoclonal Mouse IgG ₁ Clone # 988829
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived human Apolipoprotein A-IV/ApoA4 protein Glu21-Ser396 Accession # P06727
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

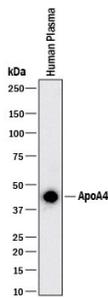
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunohistochemistry	5-25 µg/mL	See Below
Simple Western	20 µg/mL	See Below

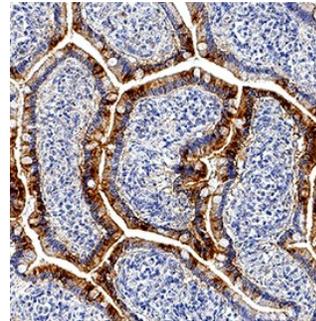
DATA

Western Blot



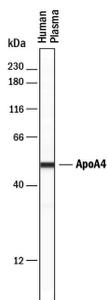
Detection of Human Apolipoprotein A-IV/ApoA4 by Western Blot. Western blot shows human plasma. PVDF membrane was probed with 1 µg/mL of Mouse Anti-Human Apolipoprotein A-IV/ApoA4 Monoclonal Antibody (Catalog # MAB8125) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for Apolipoprotein A-IV/ApoA4 at approximately 45 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunohistochemistry



Apolipoprotein A-IV/ApoA4 in Human Intestine. Apolipoprotein A-IV/ApoA4 was detected in immersion fixed paraffin-embedded sections of human intestine using Mouse Anti-Human Apolipoprotein A-IV/ApoA4 Monoclonal Antibody (Catalog # MAB8125) at 5 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC001). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm in epithelial cells. View our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.

Simple Western



Detection of Human Apolipoprotein A-IV/ApoA4 by Simple Western™. Simple Western lane view shows lysates of human plasma, loaded at 0.2 mg/mL. A specific band was detected for Apolipoprotein A-IV/ApoA4 at approximately 51 kDa (as indicated) using 20 µg/mL of Mouse Anti-Human Apolipoprotein A-IV/ApoA4 Monoclonal Antibody (Catalog # MAB8125). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none">• 12 months from date of receipt, -20 to -70 °C as supplied.• 1 month, 2 to 8 °C under sterile conditions after reconstitution.• 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Apolipoprotein A-IV (ApoA4) is a 45 kDa glycoprotein of the lipid transport system. Secreted in plasma, ApoA4 is a major component of high density lipoprotein (HDL) particles and chylomicrons, and is thought to act in intestinal lipid absorption. Levels of ApoA4 may influence HDL metabolism and modulate its effects on atherogenesis (1). ApoA4 synthesis in humans is mainly confined to the small intestine, while in mice and rats, production occurs in the liver as well (2). ApoA4 shares several structural characteristics with ApoA1 and other exchangeable apolipoproteins. The core domain of human ApoA4 contains thirteen 22-amino acid tandem repeats, and nine of which are predicted to be amphipathic α -helical repeats that are critical for lipid binding and self-association (3). The overall structure of a long rod-like dimer consisting of two 4-helix bundles stacked end-to-end in opposing orientations (4). Human ApoA4 is synthesized as a 396 amino acid (aa) precursor, from which a 20 aa N-terminal signal peptide is removed. Mature human ApoA4 shares 61% and 62% aa sequence identity with mouse and rat ApoA4, respectively.

References:

1. Duverger N. *et al.* (1991) *Eur. J. Biochem.* **201**:373.
2. Maeda, N. *et al.* (1994) *J. Biol. Chem.* **269**:23610.
3. Segrest, J. P. *et al.* (1994). *Adv. Protein. Chem.* **45**:303.
4. Deng, X. *et al.* (2012) *Structure* **20**:767.