Human AMPKβ1 Antibody

Monoclonal Mouse IgG_{2B} Clone # 1092531

Catalog Number: MAB11642

DESCRIPTION

Species Reactivity	Human
Specificity	Detects recombinant human AMPKβ1 protein in Direct ELISA.
Source	Monoclonal Mouse IgG_{2B} Clone # 1092531
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human AMPKbeta1 Met1-Ile270 Accession # Q9Y478
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	K562 human chronic myelogenous leukemia cell line and HepG2 human hepatocellular carcinoma cell line
Immunohistochemistry	0.5-25 µg/mL	Immersion fixed paraffin-embedded sections of human kidney
Simple Western	10 µg/mL	HEK293T human embryonic kidney cell line and K562 human chronic myelogenous leukemia cell line

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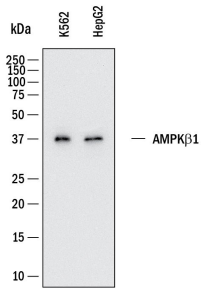
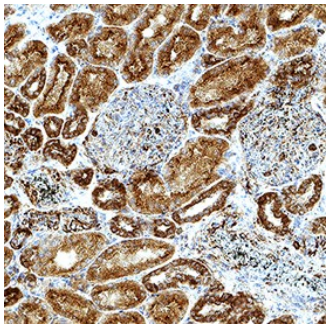
DATA

Western Blot



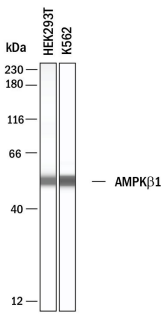
Detection of Human AMPKβ1 by Western Blot. Western Blot shows lysates of K562 human chronic myelogenous leukemia cell line and HepG2 human hepatocellular carcinoma cell line. PVDF membrane was probed with 1 µg/ml of Mouse Anti-Human AMPKβ1 Monoclonal Antibody (Catalog # MAB11642) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for AMPKβ1 at approximately 36 kDa (as indicated). This experiment was conducted under reducing conditions and using Western Blot Buffer Group 1.

Immunohistochemistry



Detection of AMPKβ1 in Human Kidney. AMPKβ1 was detected in immersion fixed paraffin-embedded sections of human kidney using Mouse Anti-Human AMPKβ1 Monoclonal Antibody (Catalog # MAB11642) at 0.5 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 VisUCyte Antigen Retrieval Reagent-Basic (Catalog # VCTS021). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to the cytoplasm. View our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.

Simple Western



Detection of Human AMPKβ1 by Simple Western™. Simple Western shows lysates of HEK293T human embryonic kidney cell line and K562 human chronic myelogenous leukemia cell line, loaded at 0.5 mg/ml. A specific band was detected for AMPKβ1 at approximately 52 kDa (as indicated) using 10 µg/mL of Mouse Anti-Human AMPKβ1 Monoclonal Antibody (Catalog # MAB11642). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

PREPARATION AND STORAGE

Reconstitution	Reconstitute lyophilized material at 0.2 mg/ml in sterile PBS. For liquid material, refer to CoA for concentration.
Shipping	Lyophilized product is shipped at ambient temperature. Liquid small pack size (-SP) is shipped with polar packs. Upon receipt, store immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 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

AMP-activated protein kinase (AMPK) is a heterotrimeric complex consisting of a catalytic α subunit and regulatory β and γ subunits. Each subunit exists as alternate isoforms (α1, α2, β1, β2, γ1, γ2, γ3), with all 12 combinations able to form complexes. The β1 subunit is expressed at higher levels than the β2 subunit in liver, while β2 is more abundant than β1 in skeletal muscle. AMPK's role in metabolic regulation has implicated this serine/threonine kinase complex as a therapeutic target in heart disease, obesity, and diabetes.

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