

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human AMPK α 2 in ELISAs. In direct ELISAs, no cross-reactivity with recombinant human AMPK α 1 is observed.
Source	Monoclonal Mouse IgG ₁ Clone # 847123
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human AMPK α 2 Phe340-Arg552 Accession # P54646
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μ m filtered solution in PBS.

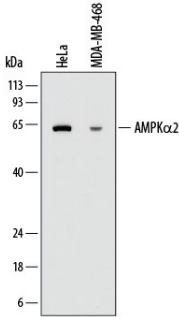
APPLICATIONS

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	2 μ g/mL	See Below
Immunocytochemistry	5-25 μ g/mL	See Below
Simple Western	20 μ g/mL	See Below

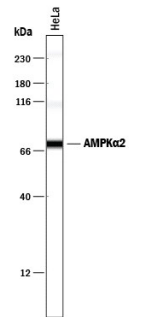
DATA

Western Blot




Detection of Human AMPK α 2 by Western Blot. Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line and MDA-MB-468 human breast cancer cell line. PVDF membrane was probed with 2 μ g/mL of Mouse Anti-Human AMPK α 2 Monoclonal Antibody (Catalog # MAB2850) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for AMPK α 2 at approximately 63 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

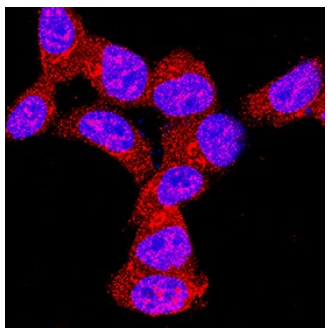
Simple Western



Detection of Human AMPK α 2 by Simple Western™. Simple Western lane view shows lysates of HeLa human cervical epithelial carcinoma cell line, loaded at 0.5 mg/mL. A specific band was detected for AMPK α 2 at approximately 71 kDa (as indicated) using 20 μ g/mL of Mouse Anti-Human AMPK α 2 Monoclonal Antibody (Catalog # MAB2850). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.



Immunocytochemistry



AMPK α 2 in HEK293 Human Cell Line. AMPK α 2 was detected in immersion fixed HEK293 human embryonic kidney cell line using Mouse Anti-Human AMPK α 2 Monoclonal Antibody (Catalog # MAB2850) at 8 μ g/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to nuclei and cytoplasm. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
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

AMP-activated protein kinase (AMPK) is a heterotrimeric complex consisting of a catalytic α subunit and regulatory β and δ subunits. The α subunit of AMPK is activated allosterically by AMP, and by phosphorylation via the AMPK kinase LKB1. Active AMPK down-regulates anabolic pathways such as fatty acid and cholesterol synthesis, and up-regulates catabolic pathways such as glycolysis and fatty acid oxidation.