Technical Data Sheet

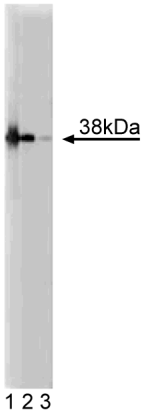
# Purified Mouse Anti-AMPK β

## Product Information

| | |
|---|---|
| **Material Number:** | **610802** |
| **Alternate Name:** | AMP activated protein kinase |
| **Size:** | 50 µg |
| **Concentration:** | 250 µg/ml |
| **Clone:** | 12/AMPKβ |
| **Immunogen:** | Rat AMPK β aa. 109-247 |
| **Isotype:** | Mouse IgG1 |
| **Reactivity:** | QC Testing: Mouse<br>Tested in Development: Rat, Human, Dog, Frog |
| **Target MW:** | 38 kDa |
| **Storage Buffer:** | Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide. |

## Description

AMP activated protein kinase (AMPK) was identified as a result of its phosphorylation and inactivation of lipid metabolism enzymes. However, AMPK also phosphorylates enzymes involved in other metabolic pathways. AMPK is activated by AMPKK (AMPK Kinase) -mediated phosphorylation in response to intracellular changes in AMP levels. Although rat skeletal muscle AMPK exists as a monomer, active rat liver AMPK is a heterotrimer of α (catalytic subunit), β, and γ subunits. The catalytic subunit (63 kDa) is structurally and functionally related to the S. cerevisiae SNF1 protein kinase, an enzyme that is required for expression of glucose repressed genes during glucose starvation. AMPK β (38 kDa) is strongly related to SIP2 (35% identity) and contains a C-terminal region that is very homologous to the SIP1/SIP2/GAL83 ASC domain. AMPK β has some identity (35%) with SNF4, which is necessary for SNF1 activation. Both AMPK β and γ are widely expressed in rat tissues. AMPK β facilitates the interactions of the α and γ subunits in vitro. Although AMPK β is clearly necessary for formation of the heterotrimeric complex, there are other probably, yet unknown, roles for this protein.




***Western blot analysis of AMPK β on a RSV-3T3 cell lysate.*** *Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of the mouse anti-AMPK β antibody.*

## Preparation and Storage

Store undiluted at -20° C.
The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

**BD Biosciences**

**www.bdbiosciences.com**

| United States | Canada | Europe | Japan | Asia Pacific | Latin America/Caribbean |
|---|---|---|---|---|---|
| 877.232.8995 | 888.259.0187 | 32.53.720.550 | 0120.8555.90 | 65.6861.0633 | 55.11.5185.9995 |

For country-specific contact information, visit **www.bdbiosciences.com/how_to_order/**

## Application Notes

**Application**

| | |
|---|---|
| Western blot | Routinely Tested |
| Immunofluorescence | Tested During Development |

**Recommended Assay Procedure:**

**Western blot:** Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml

## Suggested Companion Products

| Catalog Number | Name | Size | Clone |
|---|---|---|---|
| 554002 | HRP Goat Anti-Mouse Ig | 1.0 ml | (none) |
| 554001 | FITC Goat Anti-Mouse Ig | 0.5 mg | Polyclonal |

## Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

## References


Michell BJ, Stapleton D, Mitchelhill KI, et al. Isoform-specific purification and substrate specificity of the 5'-AMP-activated protein kinase. *J Biol Chem.* 1996; 271(45):28445-28450.(Biology)

Mitchelhill KI, Michell BJ, House CM,. Posttranslational modifications of the 5'-AMP-activated protein kinase beta1 subunit. *J Biol Chem.* 1997; 272(39):24475-24479.(Biology)

Winder WW, Wilson HA, Hardie DG, et al. Phosphorylation of rat muscle acetyl-CoA carboxylase by AMP-activated protein kinase and protein kinase A. *J Appl Physiol.* 1997; 82(1):219-225.(Biology)

Woods A, Cheung PC, Smith FC, et al. Characterization of AMP-activated protein kinase beta and gamma subunits. Assembly of the heterotrimeric complex in vitro. *J Biol Chem.* 1996; 271(17):10282-10290.(Biology)