# AMPK (A2/B2/G1), His-tag Recombinant

Catalog: 40705

Lot: 230822

## Product Information

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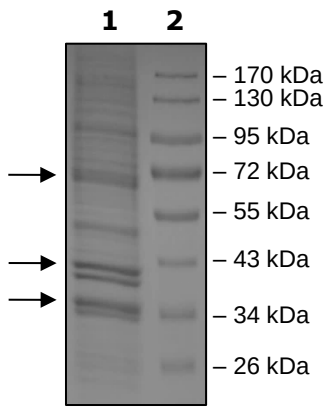
| **Description:** | Recombinant human full-length AMPK (AMP-activated protein kinase), subunits A2/B2/G1. This construct contains a C-terminal His-tag. The recombinant protein was affinity purified and is active. |
| **Species:** | Human |
| **Construct:** | AMPK (A2/B2/G1-His) |
| **Concentration:** | 0.10 mg/ml |
| **Expression System:** | Sf9 |
| **Purity:** | 80% |
| **Format:** | Aqueous buffer solution |
| **Formulated In:** | 50 mM Sodium Phosphate, pH 7.0, 300 mM NaCl, 150 mM Imidazole, 0.1 mM PMSF, 0.25 mM DTT, 25% glycerol. |
| **MW:** | A2: 69 kDa; B2: 36 kDa; G1: 41 kDa |
| **Genbank Accession:** | A2: NM_006252; B2: NM_005399; G1: NM_002733 |
| **Stability:** | At least 6 months at -80°C. Avoid freeze/thaw cycles. |
| **Storage:** | -80°C |
| **Instructions for Use:** | Thaw on ice and gently mix prior to use. DO NOT VORTEX. Perform a quick spin before opening. Aliquot into small volumes and flash freeze for long term storage. Avoid multiple freeze/thaw cycles. |
| **Specific Activity:** | 139 pmol/min/µg |
| **Assay Conditions:** | AMPK (A2/B2/G1) activity was measured by using the SAMStide synthetic peptide (HMRSAMSGLHLVKRR) diluted in 20 mM Tris-HCl (pH 7.5) to a working concentration of 1 mg/ml, in the ADP Glo™ Kinase Assay kit (Promega #V9101). Reaction was initiated by mixing increasing amounts of AMPK (A2/B2/G1) with 25 µM ATP in 40 mM Tris-HCl, pH 7.4, 20 mM $MgCl_2$, 0.1 mg/ml BSA prepared with 50 µM DTT, 10 µM AMP in 25 mM MOPS (pH 7.2) and substrate at a final concentration of 200 µg/ml. After a 40-minute incubation at room temperature, the reaction was terminated by addition of ADP-Glo™ Reagent, followed by a subsequent 40-minute incubation at room temperature. Kinase Detection Reagent was added, and the reaction was incubated for another 30 minutes at ambient temperature. Detection of luminescence was measured using the Luminescence Module Protocol on GloMax®-Multi Microplate Multimode Reader. The Specific Activity was calculated as follows: (Corrected activity, RLU) / [(Specific activity from ADP in RLU/pmol) * (Reaction time in min) *(Enzyme amount in µg or mg)]. Corrected RLU was calculated by subtracting the blank value from all the values. The blank was determined from a “no enzyme” sample by replacing the enzyme solution with an equal volume of Dilution Buffer III (1x). |
| **Applications:** | Useful for the study of enzyme kinetics, screening inhibitors, and selectivity profiling. |

## Quality Control Data

4-20% SDS-Page Coomassie Staining




Specific Activity