

Recombinant CRY1 protein

Catalog No: 82172, 82772

Expressed In: Baculovirus

Quantity: 20, 1000 µg

Source: Human

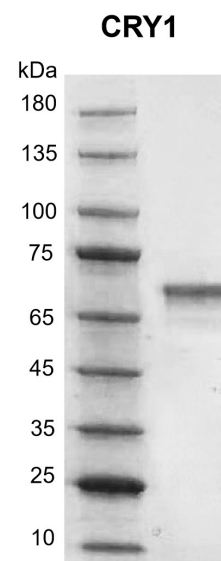
Buffer Contents: Recombinant CRY1 protein is suitable for use in enzyme kinetics, inhibitor screening, and selectivity profiling.

Background: Recombinant human **CRY1 (cryptochrome-1)**, also referred to by its gene symbol CRY1 or its historical name PHLL1 (photolyase-like 1), is a flavin adenine dinucleotide (FAD)-binding protein that functions as a core negative component of the circadian feedback loop by forming a repressor complex with PER proteins to inhibit CLOCK-BMAL1- mediated transcription. Beyond its central role in rhythm generation, this multifunctional protein is actively involved in ciliary function, intraflagellar transport, and the regulation of ciliary Hedgehog signaling, which is critical for embryonic development and tissue homeostasis. Furthermore, **CRY1** plays an important role in mitochondrial function, where it translocates to mitochondria upon mitophagy induction to promote mitochondrial motility, clearance, and energymaintenance via AMPK signaling. The recombinant form, typically produced in expression systems such as *E. coli* or insect cells, retains these key biochemical properties and is widely used in research to study circadian mechanisms, metabolic pathways, and mitochondrial dynamics.

Protein Details: Recombinant CRY1 protein was expressed in baculovirus expression system as the full-length protein (accession number NP_001400390.1) with a N-terminal FLAG tag. The molecular weight of the protein is 67.67 kDa.

Application Notes: This product was manufactured as described in Protein Details. Where possible, Active Motif has developed functional or activity assays for recombinant proteins. Additional characterization such as enzyme kinetic activity assays, inhibitor screening or other biological activity assays may not have been performed for every product. All available data for a given product is shown on the lot-specific Technical Data Sheet.

Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is guaranteed for 6 months from date of arrival.



Recombinant CRY1 protein

4-20% SDS-PAGE gel with
Coomassie blue staining

MW: 67.67 kDa kDa

Purity: >95%