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Certificate of Analysis

CAT#307-P Aequorin Protein lyophilized

Aequorin, a photoprotein originating from the jellyfish *Aequorea victoria* emits light in the presence of a trace amount of Ca^{2+} without the requirement of any other cofactor. Aequorin was "charged" with unmodified (native) Coelenterazine and will emit light at 465 nm upon Ca^{2+} contact.

Compound: *Aequorea victoria* photoprotein (untagged)

Source: recombinantly produced in E. coli, purified via multi-step chromatography

Sequence: MTSKQYSVKLTSDFDNPRWIGRHKHMFNFLDVNHNGKISLDEMVYKASDIVINN
LGATPEQAKRHKDAVEAFFGGAGMKYGVETDWPAYIEGWKKLATDELEKYAKNE
PTLIRIWGDALFDIVDKDQNGAITLDEWKAYTKAAGIIQSSEDCEETFRVCDIDES
GQLDVDEMTRQHLGFWYTMDPACEKLYGGAVP

Quantity: 100 µg per vial

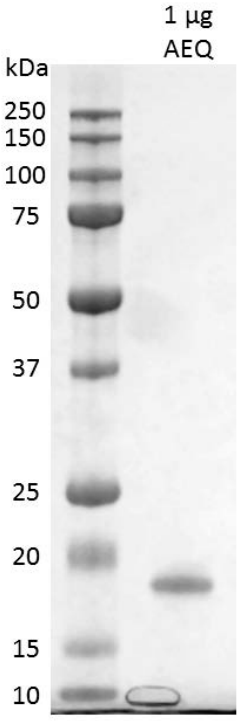
Reconstitute: in 100 µl of ddH_2O (18.2 MΩ, **Ca^{2+} free**) as 1 mg/ml solution

MW: 22.3 kDa (theoretical)

Storage: The protein is freeze dried and sealed under vacuum in a 10 fold excess of lyophilization stabilizer. We recommend storage at ≤ -20°C. Avoid repeated freeze-thaw cycles after reconstitution.

Purity: >95% by Coomassie staining

1 µg was applied on a 12% SDS-Gel and Coomassie stained



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Activity of Aequorin

1. Aequorin was reconstituted in 100 µl distilled water resulting in a 1 mg/ml solution
2. dilutions of Aequorin (in 10 mM K_2HPO_4, 50 mM NaCl, pH 7.2) were pipetted into a black 96-well plate with a total volume of 50 ul
3. 100 µl of 10 mM $CaCl_2$ in dilution buffer was injected
4. luminescence was integrated over 10 sec with 0.0 sec delay after injection