

Recombinant Enhanced Green Fluorescence Protein

Product Information

Cat

CGF-020

Product Name

Recombinant Enhanced Green Fluorescence Protein

Synonyms

eGFP

GenelD

7011691

Source

Escherichia coli.

Molecular Weight

Approximately 26.9 kDa, a single non-glycosylated polypeptide chain containing 239 amino acids.

AA Sequence

MVSKGEELFT GVPILVELD GDVNGHKFSV SGEGEDATY GKLTCLKFICT TGKLPVPWPT LVTTLTYG VQ
CFSRYPDHMK QHDFFKSAMP EGYVQERTIF FKDDGNYKTR AEVKFEGDTL VNRIELKGID FKEDGNILGH
KLEYNYN SHN VYIMADKQKN GIKVNFKIRH NIEDGSVQLA DHYQQNTPIG DGPVLLPDNH YLSTQSALSK
DPNEKRDH MV LLEFVTAAGI TLGMDELYK

Purity

> 95 % by SDS-PAGE and HPLC analyses.

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation

Recombinant Enhanced Green Fluorescence Protein

Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.

Endotoxin

Less than 1 EU/µg of reGFP as determined by LAL method.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.

Stability & Storage

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

Usage

This material is offered by Creative Biomart for research, For research and further manufacturing use only.

background

Green fluorescent protein (GFP) here refers to the protein first purified from jellyfish *Aequorea victoria*, though many other organisms have similar proteins. It is a 26.9 kDa protein (composed of 238 a.a. residues) that shows green fluorescence in short-wave light (blue to ultraviolet). Despite of wild-type GFP, many mutants of GFP have been engineered for wider usage in research. Enhanced GFP (eGFP) has S65T and F64L mutations, which make GFP show increased fluorescence and fold more efficiently under 37°, respectively. eGFP allows the use of GFP in mammalian cells. In *A. Victoria*, GFP plays roles as an energy transfer acceptor. It has long been used in cell and molecular biology as a reporter of gene expression. GFP can also been applied as a molecular thermometer to measure temperature accurately in fluids.