

Recombinant Enhanced Green Fluorecence Protein

#R00595

Size: 10 µg/500 µg

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.



Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

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°C, 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.

AA Sequence

MVSKGEELFTGVVPILVELDGDVNGHKFSVSGEGEG
DATYGKLTCLKFICTTGKLPVPWPTLVTTLTYGVCFSR
YPDHMKQHDFFKSAMPEGYVQERTIFFKDDGNYKTR
AEVKFEGDTLVNRIELKGIDFKEDGNILGHKLEYNYS
HNVYIMADKQKNGIKVNFKIRHNIEDGSVQLADHYQQ
NTPIGDGPVLLPDNHYLSTQSALSKDPNEKRDHMVLL
EFVTAAGITLGMDELYK

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.

Product Specification

Synonyms	eGFP
Accession	P42212
GenelD	7011691
Source	Escherichia coli.
Molecular Weight	Approximately 26.9 kDa, a single non-glycosylated polypeptide chain containing 239 amino acids.
Purity	> 95 % by SDS-PAGE and HPLC analyses.
Physical Appearance Formulation	Sterile Filtered White lyophilized (freeze-dried) powder. 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.