

# PrimeGene™ Recombinant Enhanced Green Fluorescent Protein (reGFP) a biotechne brand

## PrimeGene Technical Data Sheet

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<b>Catalog Number:</b>	6H1-38
<b>Source:</b>	<i>Escherichia coli</i> .
<b>Molecular Weight:</b>	Approximately 26.9 kDa, a single non-glycosylated polypeptide chain containing 239 amino acids.
<b>Quantity:</b>	10µg/50µg/1000µg
<b>AA Sequence:</b>	MVSKGEELFT GVPILVELD GDVNGHKFSV SGEGEDATY GKLTLKFICT TGKLPVPWPT LVTTLTLYGVQ CFSRYPDHMK QHDFFKSAMP EGYVQERTIF FKDDGNYKTR AEVKFEGDTL VNRIELKGID FKEDGNILGH KLEYNYN SHN VYIMADKQKN GIKVNFKIRH NIEDGSVQLA DHYQQNTPIG DGPVLLPDNH YLSTQSALS K DPNEKRDH MV LLEFVTAAGI TLGMDELYK
<b>Purity:</b>	> 95 % by SDS-PAGE and HPLC analyses.
<b>Physical Appearance:</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Formulation:</b>	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.
<b>Endotoxin:</b>	Less than 1 EU/µg of reGFP as determined by LAL method.
<b>Reconstitution:</b>	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.
<b>Shipping:</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage:</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"><li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li><li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li><li>● 3 months, -20 to -70 °C under sterile conditions after reconstitution.</li></ul>
<b>Usage:</b>	This material is offered by Shanghai PrimeGene Bio-Tech for research, laboratory or further evaluation purposes. <b>NOT FOR HUMAN USE.</b>

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### ***Enhanced Green Fluorescent Protein***

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 be applied as a molecular thermometer to measure temperature accurately in fluids.