abcam

Product datasheet

Recombinant A. victoria GFP protein ab84191

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Description

Product name	Recombinant A. victoria GFP protein
Purity	> 95 % SDS-PAGE. Purified using conventional chromatography techniques.
Endotoxin level	< 1.000 Eu/µg
Expression system	Escherichia coli
Accession	P42212
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Aequorea victoria
Sequence	MSKGEELFTG VVPILVELDG DVNGHKFSVS GEGEGDATYG KLTLKFICTT GKLPVPWPTL VTTFSYGVQC FSRYPDHMKQ HDFFKSAMPE GYVQERTIFF KDDGNYKTRA EVKFEGDTLV NRIELKGIDF KEDGNILGHK LEYNYNSHNV YIMADKQKNG IKVNFKIRHN IEDGSVQLAD HYQQNTPIGD GPVLLPDNHY LSTQSALSKD PNEKRDHMVL LEFVTAAGIT HGMDELYK
Predicted molecular weight	27 kDa
Amino acids	1 to 238
Additional sequence information	(AAA27721) MW confirmed by MALDI-TOF.
Description	Recombinant *A. victoria* GFP protein

Specifications

Our **Abpromise guarantee** covers the use of **ab84191** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	SDS-PAGE Western blot Functional Studies
Mass spectrometry	MALDI-TOF

Form	Liquid
Additional notes	Endotoxin Level determined by LAL method. Concentration determined by Bradford assay.

Preparation and Storage

Stability and Storage	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle. pH: 8.00 Constituents: 0.316% Tris HCl, 10% Glycerol This product is an active protein and may elicit a biological response in vivo, handle with caution.

General Info

Relevance

Function: Energy-transfer acceptor. Its role is to transduce the blue chemiluminescence of the protein aequorin into green fluorescent light by energy transfer. Fluoresces in vivo upon receiving energy from the Ca^{2+} -activated photoprotein aequorin.

Subunit structure: Monomer.

Tissue specificity: Photocytes.

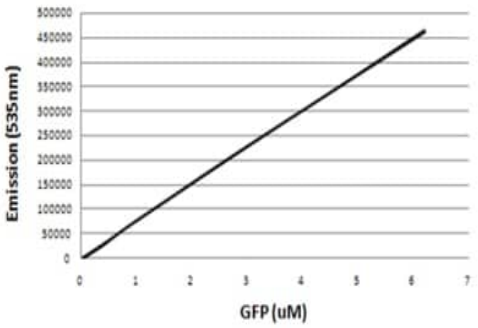
Post-translational modification: Contains a chromophore consisting of modified amino acid residues. The chromophore is formed by autocatalytic backbone condensation between Ser-65 and Gly-67, and oxidation of Tyr-66 to didehydrotyrosine. Maturation of the chromophore requires nothing other than molecular oxygen.

Biotechnological use: Green fluorescent protein has been engineered to produce a vast number of variously colored mutants, fusion proteins, and biosensors. Fluorescent proteins and its mutated allelic forms, blue, cyan and yellow have become a useful and ubiquitous tool for making chimeric proteins, where they function as a fluorescent protein tag. Typically they tolerate N- and C-terminal fusion to a broad variety of proteins. They have been expressed in most known cell types and are used as a noninvasive fluorescent marker in living cells and organisms. They enable a wide range of applications where they have functioned as a cell lineage tracer, reporter of gene expression, or as a measure of protein-protein interactions. Can also be used as a molecular thermometer, allowing accurate temperature measurements in fluids. The measurement process relies on the detection of the blinking of GFP using fluorescence correlation spectroscopy.

Sequence similarities: Belongs to the GFP family.

Biophysicochemical properties: Absorption: Abs(max)=395 nm
Exhibits a smaller absorbance peak at 470 nm. The fluorescence emission spectrum peaks at 509 nm with a shoulder at 540 nm.

Images



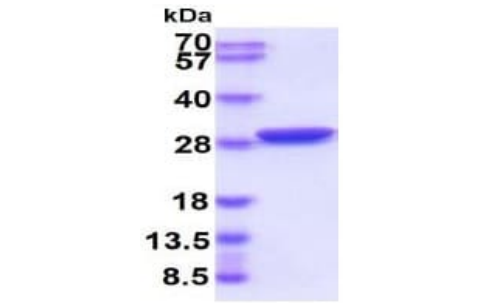
Functional Studies - Recombinant *A. victoria* GFP protein (ab84191)

1. Prepare a 150 µl recombinant GFP with various concentrations (0.00074 nM - 6.21 µM) in assay buffer and equilibrate to 25°C. (Assay buffer: 10 mM Tris-HCl (pH 8.0), 10 mM EDTA, 0.02% sodium azide.)

2. Read at excitation wavelengths 485 nm and emission 535 nm.

- 96 Well Polystyrene Microplate, black

- Fluorescent plate reader



SDS-PAGE - Recombinant *A. victoria* GFP protein (ab84191)

3 ug of reduced ab84191 on SDS-PAGE, stained with Coomassie Blue.

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