

Product datasheet

GFP Quantification Kit ab235672

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Overview

Product name	GFP Quantification Kit
Detection method	Fluorescent
Sample type	Cell culture extracts, Tissue Extracts, Cell Lysate, Tissue Homogenate, Tissue Lysate
Assay type	Quantitative
Range	0.01 µg/ml - 10 µg/ml
Product overview	<p>The GFP Quantification Kit (ab235672) quantifies GFP in a 96 microplate format for a wide array of cells and tissues.</p> <p>This kit can detect a wide range of GFP concentrations (0.01-10 µg/ml). Cells or tissues can be homogenized directly in the GFP Assay Buffer, the quantity of GFP is then determined by comparing the fluorescence with that of the GFP standard. Ex/Em = 488/507 nm.</p>
Notes	<p>This product is manufactured by BioVision, an Abcam company and was previously called K815 GFP Quantitation Kit. K815-100 is the same size as the 100 test size of ab235672.</p>
Platform	Microplate reader

Properties

Storage instructions Store at -20°C. Please refer to protocols.

Components	100 tests
GFP Assay Buffer	1 x 25ml
GFP Standard	1 vial
Stop Solution II	1 x 1ml

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 Ca²⁺-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.

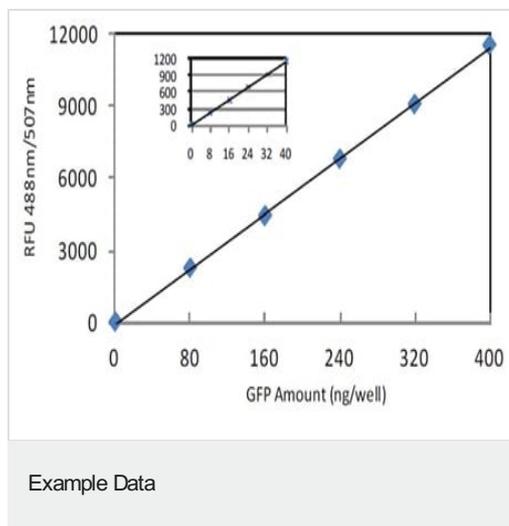
Biotechnological use: Green fluorescent protein has been engineered to produce a vast number of variously colored mutants, fusion proteins, and biosensors. Fluorescent proteins and its mutated allelic forms, blue, cyan and yellow have become a useful and ubiquitous tool for making chimeric proteins, 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



GFP standard curve.

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