Green fluorescent protein AceGFP

- **Monomer, successful performance in fusions**

Description

AceGFP is an enhanced bright mutant of colorless wild-type GFP-like protein from *Aequrea coerulescens* jellyfish (Gurskaya *et al.*, 2003). AceGFP possesses single excitation maximum at 480 nm, and emission maximum at 505 nm. Extinction coefficient of 50 000 $M^{-1}cm^{-1}$ and quantum yield of 0.55 make this protein as bright as widely used EGFP.

AceGFP demonstrates successful performance in fusions with many cellular proteins incuding beta-actin, fibrillarin, BID protein.

Recommended filter sets

AceGFP and its fusions can be detected using common fluorescence filter sets for EGFP, FITC, and other green dyes. Recommended Omega Optical filter sets are QMAX-Green, XF100-2, XF100-3, XF115-2, and XF116-2.

Main properties of AceGFP

Characteristic	
Fluorescence color	green
Excitation max	480 nm
Emission max	505 nm
Quantum yield	0.55
Extinction coefficient	50 000 $M^{-1}cm^{-1}$
Brightness**	27.5
Structure	monomer
Aggregation	no
Maturation at 37°C	fast

*Brightness is a product of extinction coefficient and quantum yield, divided by 1000.

References

Gurskaya *et al.* (2003) A colourless green fluorescent protein homologue from the non-fluorescent hydromedusa Aequorea coerulescens and its fluorescent mutants. Biochem J. 373(Pt 2): 403-408.