

# Allele mNeonGreen

Due to the advancements in fluorescence microscopy, spatial resolution has been broadened to the nanometer scale. This technology, termed super resolution imaging, will allow researchers the ability to image cellular events in a much higher level of clarity and detail. As imaging moves into the super resolution era, most common fluorescent proteins, including GFP, may not possess certain characteristics beneficial for super resolution applications. With this in mind, Allele now offers a new high performance monomeric yellow-green fluorescent protein, mNeonGreen, derived from a tetrameric fluorescent protein from cephalochordate *Branchiostoma lanceolatum*.

## Description

mNeonGreen is the brightest monomeric green or yellow fluorescent protein to date, and is an excellent fusion tag for traditional imaging as well as stochastic single-molecule super resolution imaging. It is a stellar fluorescence resonance energy transfer (FRET) acceptor for cyan fluorescent proteins.

## Features

- ◆ Brightest monomeric fluorescent protein to date
- ◆ Excellent FRET acceptor for CFPs
- ◆ Superior characteristics for SRI
- ◆ Can be used for both (f-)PALM/STORM and SIM

### Box 1 | Basic Info<sup>[1]</sup>

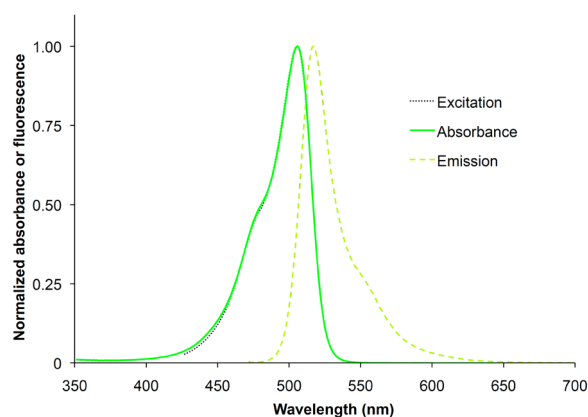
$\lambda_{ex}$	$\lambda_{em}$	$\epsilon$	$\Phi$	Brightness	$pK_a$
506	517	116 ± 4	0.8	92.8	5.7

**ACCESSION: KC295282**

### References

1. Shaner, N.C. et al. Nat. Methods doi:10.1038/nmeth.2413 (2013).

### Box 2 | mNeonGreen absorbance, excitation, and emission.



### Box 3 | Super Resolution Imaging Localization Data<sup>[1]</sup>

Fluorescent Protein	# Molecules Localized	# Photons per Molecule	PSF Width (nm)
mNeonGreen	33,783	663 ± 259	167.3 ± 34.1
Clover	15,281	408 ± 263	176.4 ± 57.6
mEGFP	6,803	523 ± 261	165.8 ± 37.1

### Box 4 | Plasmid Info

<b>SKU #</b>	ABP-FP-MNGPNCS
<b>Name</b>	pNCS-mNeonGreen
<b>Description</b>	Bacterial expression vector that constitutively expresses 6xHis-tagged mNeonGreen in <i>E. coli</i>

Box 5 | pNCS mNeonGreen Plasmid Map

