

Fluorescent Protein Expression Plasmid

CoralHue[®]

Nucleoplasm-targeted AG Expression Plasmid (pNP-AG)

Code No.

AM-V0214

Quantity

20 µg

BACKGROUND: This plasmid is designed for expression of Nucleoplasm-targeted *CoralHue*[®] Azami Green (NP-AG) in mammalian cells. *CoralHue*[®] Azami Green (AG), which was originally cloned from the stony coral whose Japanese name is “Azami-Sango”, absorbs light maximally at 492 nm and emits green light at 505 nm. *CoralHue*[®] AG rapidly matures to form a tetrameric complex. Targeting of AG to the Nucleoplasm is achieved with the signal peptide fused to the C-terminus of AG.

SOURCE: The *CoralHue*[®] AG gene was originally cloned from the stony coral “Azami-Sango (*Galaxea fascicularis*).”

FORMULATION: Dry form.
Reconstitute with distilled water or TE before use.

PURITY: A260/A280 > 1.5

STORAGE: Store at -20°C.

SEQUENCE LANDMARKS (bases):

CoralHue[®] NP-AG (Including Stop Codon): 1-750
CMV promoter: bases 4093-4665
SV40 polyA: bases 903-937
Kanamycin/Neomycin resistance gene: bases 1980-2771
pUC origin: bases 3359-4002
f1 origin: bases 1000-1455
SV40 origin: bases 1796-1931

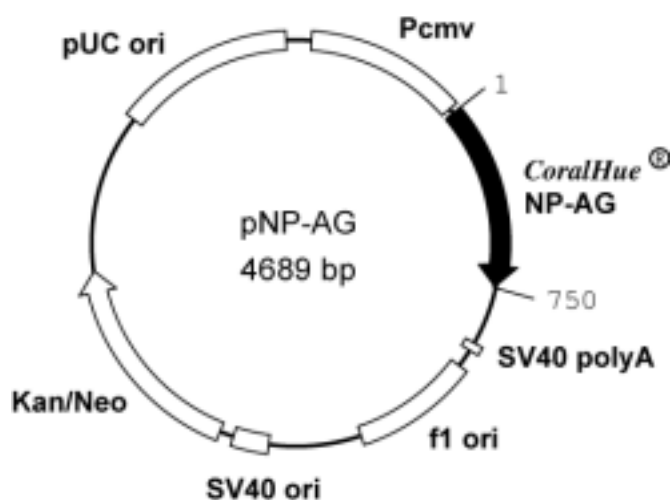
INTENDED USE: For research use only. Not for clinical or diagnostic use.

REFERENCE:

Karasawa, S., *et al. J. Biol. Chem.* **278**, 34167-71 (2003)

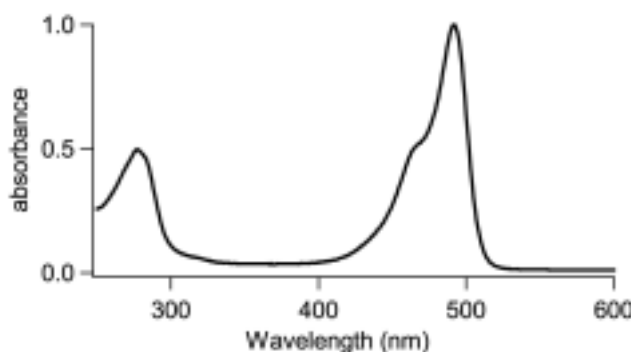
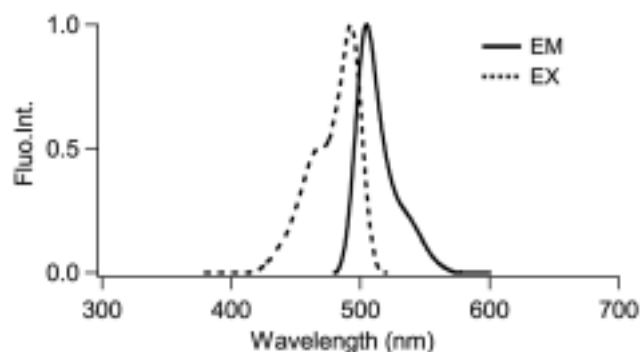
GenBank:

Accession Numbers: AB107915, AB108447



CoralHue[®] NP-AG: 249 amino acids

	Excit./Emiss.Maxima (nm)	Extinction Coefficient(M ⁻¹ cm ⁻¹)	Fluorescence Quantum Yield	pH sensitivity
AG	492/505	72,300 (492 nm)	0.67	pKa<5.0



CoralHue[®] NP-AG DNA Sequence

ATGGTGAGTGTGATTAACCCAGAGATGAAGATCAAGCTGTGTAT
GAGAGGCACTGTAAACGGGCATAATTTTCGTGATTGAAGGAGAAG
GAAAAGGAAATCCTTACGAGGGAACGCAGATTTTAGACCTGAAC
GTCACTGAAGGCGCACCTCTGCCTTTTCGCTTACGATATCTTGAC
AACAGTGTTCAGTACGGCAACAGGGCATTACCAAGTACCCAG
CAGATATTCAGGACTATTTCAAGCAGACTTTTCTGAGGGGTAT
CACTGGGAAAGAAGCATGACTTATGAAGACCAGGGCATTTCAC
CGCCACAAGCAACATAAGCATGAGGGGCGACTGTTTTTTCTATG
ACATTCGTTTTGATGGTGTGAACTTTCTCCCAATGGTCCGGTT
ATGCAGAAGAAGACTCTTAAATGGGAGCCATCCACTGAGAAAAT
GTACGTACGTGATGGAGTGCTGAAGGGTATGTTAACATGGCTC
TGTTGCTTGAAGGAGGTGGCCATTATCGATGTGATTTCAAACCT
ACTTACAAAGCAAAGAAGGATGTCCGTTTGCCAGACTATCACTT
TGTGGACCACCGCATTGAGATTTTGAAGCATGACAAAAGATTACA
ACAAGGTCAAGCTCTATGAGAATGCCGTTGCTCGCTATTCTATG
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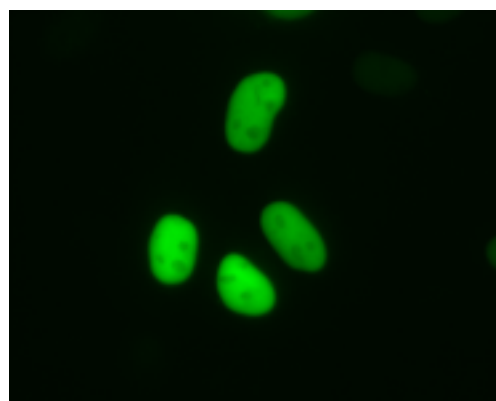
AA

(Underlined sequences in red are from poly (ADP-ribose) polymerase.)

CoralHue[®] NP-AG Amino Acid Sequence

MVSVIKPEMKIKLCMRGTVNGHNFVIEGEGKGNPYEGTQILDNLN
VTEGAPLPFAYDILTTVFQYGNRAFTKYPADIQDYFKQTFPEGY
HWERSMTYEDQGITATSNISMRGDCFFYDIRFDGVNFPPNGPV
MQKKTLLKWPSTEKMYVRDGLKGDVNMALLLEGGHYRCDFKT
TYKAKKDVRLPDYHFVDHRIEILKHKDYNKVKLYENAVARYSM
LPSQAKGSGDEVEGVVEVAKKKSKKEKDK*

(Underlined sequences in red are from poly (ADP-ribose) polymerase.)



CoralHue[®] NP-AG expression in HeLa cells

Fluorescent protein **CoralHue[®] NP-AG** used in this product was co-developed with the Laboratory for Cell Function and Dynamics, the Advanced Technology Development Center, the Brain Science Institute, and the Institute of Physical and Chemical Research (RIKEN) (lab head Dr. Atsushi Miyawaki).

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