



The Twinkle Factory
Stain different, tag FAST.

Far-red (fr)FAST

frFAST is a small protein tag of 125 amino acids (14 kDa) engineered from the photoactive yellow protein (PYP) from *Halorhodospira halophila*. frFAST can be fused to the N- or C-terminus of any protein of interest. frFAST forms non-covalent and reversible fluorescent molecular assemblies with ^{Tf}Poppy, enabling to fluorescently label frFAST-tagged proteins in vitro, in live cells and in multicellular organisms.

frFAST sequence

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MEHVAFGSEDIENLAKMDDGQLDGLAFGAIQLDGDGNILQYNAAEGDITGRDPKQVIGKNLFKDVAPGTVSSGFYGFKFK  
EGVASGNLNTMFEWMIPTSRGPTKVKIHMKKALSGDSYWVFKRV
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DNA sequence coding for frFAST

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atggagcatgttgcccttggcagtgaggacatcgagaacacttggccaaaatggacgacggacaactggatgggttggccttggcgcaattcagctcgat  
ggtgacgggaatatcctgcagtacaatgctgctgaaggagacatcacaggcagagatcccaaacaggtgattgggaagaacttattcaaggatggtgcac  
ctggaacggtttcctccgggttttacggcaaatcaaggaaggcgtagcgtcagggaaatctgaacacatgttcgaatggatgataccgacaagcagggga  
ccaaccaaggtcaagatacacatgaagaaagcccttccggtgacagctattgggtctttgtgaaacgggtg
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- EP 3 164 411; JP 2017-527,261; WO 2016/001,437; US 10,138,278 (Fluorogen activating and shifting tag (FAST))
- EP 3 404 022; JP 2020-520,676; WO 2018/211,090; US 2020-124,611 (Membrane-impermeant fluorogenic chromophores)
- EP 3 719 007 (Split photoactive yellow protein complementation system and uses thereof)

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