



The Twinkle Factory
Stain different, tag FAST.

tdFAST1

tdFAST1 is a protein tag of 256 amino acids (28 kDa) obtained by tandemization of FAST1. tdFAST1 can be fused to the N- or C-terminus of any protein of interest. tdFAST1 forms non-covalent and reversible fluorescent molecular assemblies with various ¹⁹F-fluorogens of the Twinkle Factory, enabling to fluorescently label tdFAST1-tagged proteins in vitro, in live cells and in multicellular organisms.

tdFAST1 sequence

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MEHVAFGSEDIENLAKMDDGQLDGLAFGAIQLDGDGNILQYNAAEGDITGRDPKQVIGKNFFKDVA  
PGTDSPEFYGKFKEGVASGNLNTMFEWMIPTSRGPTKVKVHMKKALSGDSYWWFVKRVGGGSGGGEH  
VAFGSEDIENLAKMDDGQLDGLAFGAIQLDGDGNILQYNAAEGDITGRDPKQVIGKNFFKDVA  
PGTDSPEFYGKFKEGVASGNLNTMFEWMIPTSRGPTKVKVHMKKALSGDSYWWFVKRV
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DNA sequence coding for tdFAST1

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Atggaacatgtcgccttcggcagcgaggatcgagaacactctggctaagatggatgacgggcaactggacggcttggcattcgg  
ggccattcaactggacggggacggaatattctccagtacaatgcagctgaaggtgacataactggacgtgacctaacaagtatt  
ggcaagaattctcaagatgttgcctccggcaccgattcacctgagtttacgggaagttcaagagggcgttgcctccggcaacctc  
aacactatgttcgaatggatgataccgacaagcagagggccaaccaaggttaaagttcatatgaagaagctctgtctggagactcta  
ttgggtgttggtagagagatcgccggcggctccggaggaggagaacacgcttgccttggctctgaggatcgaataacgctggc  
caaatggatgacggtcagctggatggcctggcattcggagccatacagcttgacggcgtggaacatcctccagtacaacgccc  
ggagggtagacattaccggtcgcgatccaaaacaggtattggcaagaactcttaaggacgttgacccgggactgactctcccgat  
tttacggaaagtcaaggaaggggtggcatctggaatcttaatacaatgttgaatggatgattcctactagtagaggaccaacaag  
gtgaaggtgacatgaagaaagccttgcggcgactcctactgggtgttggtagaacgggtg
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Note: tdFAST1 was originally named "td-FAST" in Tebo et al. Biochemistry 57, 5648-5653 (2018).

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EP 3 164 411; JP 2017-527,261; WO 2016/001,437 (Fluorogen activating and shifting tag (FAST))

EP17305591; PCT/EP2018/063146 (Membrane-impermeant fluorogenic chromophores)

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