Construct information sheet

Gene name	**OPTN**
Uniprot ID	Q96CV9
Region	M1 - G510

Description	Optineurin
Synonyms	ALS12, FIP2, GLC1E, HIP7, HYPL, NRP, TFIIIA-INTP
Construct ID	OPTNA-c001
Protein sequence	MHHHHHHSSGVDLGTENLYFQ*SMSHQPLSCLTEKEDSPSESTGN GPPHLAHPNLDTFTPEELLQQMKELLTENHQLKEAMKLNNQAMKG RFEELSAWTEKQKEERQFFEIQSKEAKERLMALSHENEKLKEELG KLKGKSERSSEDPTDDSRLPRAEAEQEKDQLRTQVVRLQAEKADL LGIVSELQLKLNSSGSSEDSFVEIRMAEGEAEGSVKEIKHSPGPT RTVSTGTALSKYRSRSADGAKNYFEHEELTVSQLLLCLREGNQKV ERLEVALKEAKERVSDFEKKTSNRSEIETQTEGSTEKENDEEKGP ETVGSEVEALNLQVTSLFKELQEAHTKLSEAELMKKRLQEKCQAL ERKNSAIPSELNEKQELVYTNKKLELQVESMLSEIKMEQAKTEDE KSKLTVLQMTHNKLLQEHNNALKTIEELTRKESEKVDRAVLKELS EKLELAEKALASKQLQMDEMKQTIAKQEEDLETMTILRAQMEVYC SDFHAERAAREKIHEEKEQLALQLAVLLKENDAFEDGGSSKGGYG LNDIFEAQKIEWHE
DNA sequence (coding sequence)	ATGCACCATCATCATCATCATTCTTCTGGTGTAGATCTGGGTACC GAGAACCTGTACTTCCAATCCATGTCCCATCAACCTCTCAGCTGC CTCACTGAAAAGGAGGACAGCCCCAGTGAAAGCACAGGAAATGGA CCCCCCCACCTGGCCCACCCAAACCTGGACACGTTTACCCCGGAG GAGCTGCTGCAGCAGATGAAAGAGCTCCTGACCGAGAACCACCAG CTGAAAGAAGCCATGAAGCTAAATAATCAAGCCATGAAAGGGAGA TTTGAGGAGCTTTCGGCCTGGACAGAGAAACAGAAGGAAGAACGC CAGTTTTTTGAGATACAGAGCAAAGAAGCAAAAGAGCGTCTAATG GCCTTGAGTCATGAGAATGAGAAATTGAAGGAAGAGCTTGGAAAA CTAAAAGGGAAATCAGAAAGGTCATCTGAGGACCCCACTGATGAC TCCAGGCTTCCCAGGGCCGAAGCGGAGCAGGAAAAGGACCAGCTC AGGACCCAGGTGGTGAGGCTACAAGCAGAGAAGGCAGACCTGTTG GGCATCGTGTCTGAACTGCAGCTCAAGCTGAACTCCAGCGGCTCC TCAGAAGATTCCTTTGTTGAAATTAGGATGGCTGAAGGAGAAGCA GAAGGGTCAGTAAAAGAAATCAAGCATAGTCCTGGGCCCACGAGA ACAGTCTCCACTGGCACGGCATTGTCTAAATATAGGAGCAGATCT GCAGATGGGGCCAAGAATTACTTCGAACATGAGGAGTTAACTGTG AGCCAGCTCCTGCTGTGCCTAAGGGAAGGGAATCAGAAGGTGGAG AGACTTGAAGTTGCACTCAAGGAGGCCAAAGAAAGAGTTTCAGAT TTTGAAAAGAAAACAAGTAATCGTTCTGAGATTGAAACCCAGACA GAGGGGAGCACAGAGAAAGAGAATGATGAAGAGAAAGGCCCGGAG ACTGTTGGAAGCGAAGTGGAAGCACTGAACCTCCAGGTGACATCT CTGTTTAAGGAGCTTCAAGAGGCTCATACAAAACTCAGCGAAGCT GAGCTAATGAAGAAGAGACTTCAAGAAAAGTGTCAGGCCCTTGAA AGGAAAAATTCTGCAATTCCATCAGAGTTGAATGAAAAGCAAGAG CTTGTTTATACTAACAAAAAGTTAGAGCTACAAGTGGAAAGCATG CTATCAGAAATCAAAATGGAACAGGCTAAAACAGAGGATGAAAAG TCCAAATTAACTGTGCTACAGATGACACACAACAAGCTTCTTCAA GAACATAATAATGCATTGAAAACAATTGAGGAACTAACAAGAAAA GAGTCAGAAAAAGTGGACAGGGCAGTGCTGAAGGAACTGAGTGAA AAACTGGAACTGGCAGAGAAGGCTCTGGCTTCCAAACAGCTGCAA ATGGATGAAATGAAGCAAACCATTGCCAAGCAGGAAGAGGACCTG GAAACCATGACCATCCTCAGGGCTCAGATGGAAGTTTACTGTTCT GATTTTCATGCTGAAAGAGCAGCGAGAGAGAAAATTCATGAGGAA AAGGAGCAACTGGCATTGCAGCTGGCAGTTCTGCTGAAAGAGAAT

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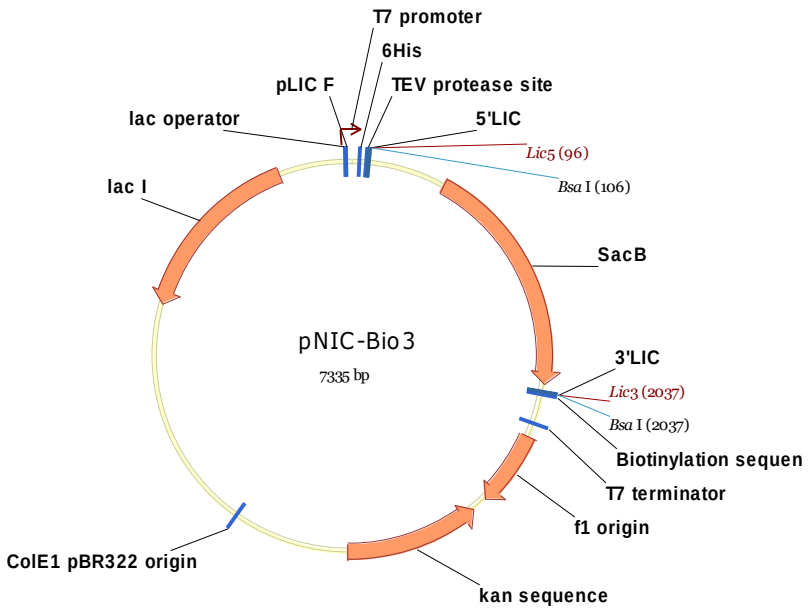
	GATGCTTTCGAAGACGGAGGCAGCAGTAAAGGTGGATACGGCCTG AATGATATCTTTGAAGCGCAGAAGATTGAATGGCATGAATGA
Construct accession No.	

Vector information:

pNIC-Bio3	Expression vector with N-terminal His6-TEV and C-terminal avi-tag
Antibiotic resistance	Kanamycin, 50 μg/ml
Promoter	T7 - lacO
N-terminal fusion – seq.	MHHHHHHSSGVDLGTENLYFQ*SM (* - TEV cleavage site)
N-terminal fusion – MW	2684.1 Da including Met (2465.8 Da removed by TEV cleavage)
C-terminal fusion – seq.	GSKGGYGLNDIFEAQ**K***IEWHE (* biotinylation site)
C-terminal fusion - MW	2396.57 Da, +226 Da for biotinylation
Protease cleavage	TEV protease
Preferred expression host	DE3 hosts: BL21, Rosetta, etc. MUST express T7 RNA polymerase. For effective biotinylation, the host should overexpress BirA (e.g. from plasmid pCDF-BIRA, GenBank: JF914075)
Genebank: JN792439	Reference: PMID: 22027370



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