

Light Sensor

Blue Light

**Light-sensor Group
@USTC iGEM**

- **Sequence Searching**
- **Sequence Analysis**
- **Sequence Searching for Promoter**



Help

Entry	b1162 CDS E.coli
Gene name	ycgE, ECK1149, JW1149
Definition	predicted DNA-binding transcriptional regulator
Class	BRITE hierarchy
SSDB	Ortholog Paralog Gene cluster
Motif	Pfam: MerR PROSITE: HTH_MERR_1 HTH_MERR_2 Motif
Other DBs	Pasteur: ycgE RegulonDB: B1162 EcoGene: EG13886 ECOCYC: G6602 NCBI-GI: 16129125 NCBI-GeneID: 945735 UniProt: P75989
LinkDB	All DBs
Position	complement(1212551..1213282) Genome map
AA seq	243 aa AA seq DB search MAYYSIGDVAERCGINPVTLRWQRRYGLLKPQRSEGGHRLFDEEDIQRIEIEIKRWISNG VPVGVKALLETTSDTEDDWSRLQEEMMSILRMANPAKLRARIISLGREYPVDQLINHV YLPVQRQLVLDHNTSRIMS S MFDGALIEYAATSLFEMRRKPGKEAILMAWNVEERARLWL EAWRLSLSGWHISVLADPIESPRELEFPTQTTLIVWTGMAPTRRQNELLQHWGEQGYKVI F HAP
NT seq	732 nt NT seq +upstream <input type="text" value="0"/> nt +downstream <input type="text" value="0"/> nt gtggccttattacagcattggtgatggttgcgaacggttgcgggattaatcctgtcactctc cgggcctggcaacgcgctacggttggtaaaaccacagcgcagtgaggcggacaccga ctctttgatgaagaacatacaacgcacgaagagatcaagcgttgataagtaatggc gtccctgtaggcaaaagttaagcattactggaaccaccagccaggatacggagatgac tggagccgctgcaagaagagatgatgtcaattcttcgatggcctaactcgcgcaaaacta cgcgcgagaattatttactgggtcgagagtaccagtagatcaattgattaatcatgtt taccttctgttcgcccagctctcgtgcttgatcacaacacctcccgcattatgagcagt atgtttgacggcgcatattgaatacgcagcaacctcgcttttgaaatgcccggtaag cccggtaaaagaccattctgatggcgtggaatgtgaagagagacacgattgtggctg gaagcatggcgtttaccattgtoaggatggcacatttctggtcttctgctgatccattgaa tcgcccggcggaaactgttcccgaacaaacattgattgtctggacaggcatggcaca acgagaaggcaaacgaacttttacaacactgggtgagcaaggtataaagtcatctt catgcccctaa



Light Sensor

SSDB Motif Search Result

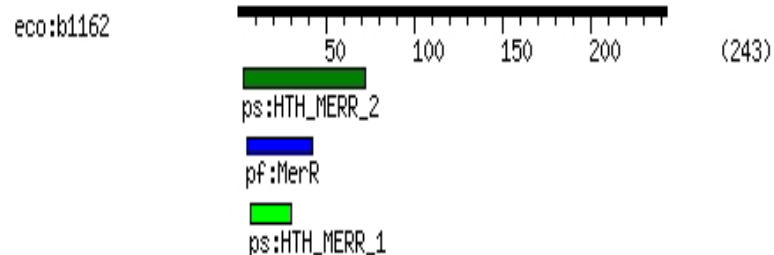
Organism : E.coli

Gene : b1162

Definition : predicted DNA-binding transcriptional regulator

Motif id	From	To	Definition	E value	Score
ps:HTH_MERR_2	3	72	MerR-type HTH domain profile.	-	102734
pf:MerR	5	42	MerR family regulatory protein	5.3e-11	-
ps:HTH_MERR_1	7	30	MerR-type HTH domain signature.	-	-

Search GENES with the same motifs



[View sequence](#)



Entry	b1163 CDS E.coli
Gene name	ycgF, ECK1150, JW1150
Definition	predicted FAD-binding phosphodiesterase
Class	BRITE hierarchy
SSDB	Ortholog Paralog Gene cluster
Motif	Pfam: BLUF EAL PROSITE: BLUF EAL Motif
Other DBs	Pasteur: ycgF RegulonDB: B1163 EcoGene: EG13887 ECOCYC: G6603 NCBI-GI: 16129126 NCBI-GeneID: 947592 UniProt: P75990
LinkDB	All DBs
Position	complement(1213487..1214698) Genome map
AA seq	403 aa AA seq DB search MLTTLIYRSHIRDDPEVKKIEEMVSIANRRNQSDVTGILLFNGSHFFQLLEGPEEQVKM IYRAICQDPRHYNIVELLCDYAPARRFVGKAGMELFDLRLHERDDVQLQAVFDKGTSKFQLT YDDRALQFFRTFVLATEQSTYFEIPAEDSWLFIADGSDKELDSCALSPTINDHFAPHPIV DPLSRRIIAFEAIVQKNEDSPSAIAVQQRKDGEITYADLKSALAFTMAHALELGDKMIS INLLPMTLVNEPDAVSFLLNEIKANALVPEQIIVEFTSEVISRFDEFAEAIKSLKAAGI SVAIDHFGAGFAGLLLSRFQPDRIKISQELITNVHKSQPRQAIQAIKCCSTSLIEIQVS AMGVATPEEWMWLESAGIEMFQGDLPFAKALNGIPSIAPWPEKK
NT seq	1212 nt NT seq +upstream <input type="text" value="0"/> nt +downstream <input type="text" value="0"/> nt atgcttaccacccttatttctgtagccatatacgtgacgacgaacctgtcaaaaaaatc gaagaaatggtttcgatagcaaatcgcaggaacatgcagtcctgacgtaacagggatccta ctgtttaatggttctcatTTTTCCAGCTCTCGGAAGGTCGGGAAGACAGGTTAAATG ataatcgggctatatagccaggatccacggcactataatattgttgagctgctgtgagat tacgcgctgctgcgcttttggcaagcgggaatggaattattgtattgctgctgcac gagcgagatgacgttttacagccgtattcgacaaaagccacatcaaaatcagcctaact tatgatgacagagcctacaatttttctgacttttgccttgcacccgaacaatcaacc tatttcgagatccctgccgaagactcctggcttttatacgtgacggatcctgataaagaa cttgattcctgctgccccttcaccaactataaacgaccactttgcttccatcctattgtc gatcccttatcggcgggataatcgcttttgaagccattgtgcaaaaaatgaagatagc ccatcagccatagcgggttgggcagcgtaaagacggggaaatctacacagcggatcctaaa agtaagcgccttgcatcattcagatggcacagcacttgagctcggtgataaaatgattca atcaatctattacctatgacctggttaacgaacctgacgcagctctttttacttaat gaaataaaggccaatgctctggtgctgaacaaatcatcgttgaaatctactgaaagtga gtcatatctcgggttgatgagtttggcgaagcgatgaaatcgtgtaaaggctgctggtatc agtgtgacaattgatcatttggcgaggtttgctggtttgtactcctgtcaccgcttc cagcctgacagaattaaaatcagtcagggaattgattaccaatgttcataaaagtggcca cggcaggcaattattcaggcgatcataaaatgctgtacatcacttgaaatcaagtcagt gctatggcgctggcaaccacagaagatggatggcttgaatccgcaggaattgagatg tttcaggagatctgtttgctaaagcctaattgaaatggatcccttccatagcgtggcca gagaaaaataa

Light Sensor

SSDB Motif Search Result

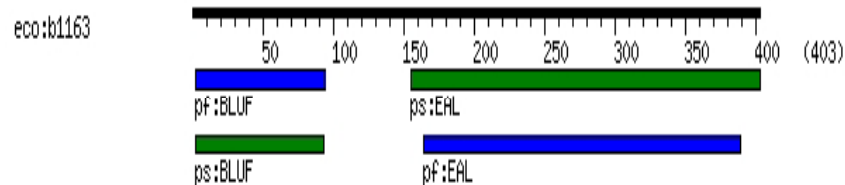
Organism : E.coli

Gene : b1163

Definition : predicted FAD-binding phosphodiesterase

Motif id	From	To	Definition	E value	Score
pf:BLUF	2	94	Sensors of blue-light using FAD	2.4e-38	-
ps:BLUF	2	93	BLUF domain profile.	-	1703
ps:EAL	155	403	EAL domain profile.	-	1839
pf:EAL	164	389	EAL domain	1.3e-47	-

Search GENES with the same motifs



[View sequence](#)

Sequence Analysis

Light Sensor

Restriction Sites:

For EcoR I , Xba I , Spe I , Pst I :
there is no restriction sites in neither
ycg E & ycgF !

感谢您的关注😊