



Article

Characterization of a Novel Fe²⁺ Activated Non-Blue Laccase from *Methylobacterium extorquens*

Abidan Ainiwaer, Yue Liang, Xiao Ye, Renjun Gao *

Key Laboratory for Molecular Enzymology and Engineering, The Ministry of Education, School of Life Science, Jilin University, Changchun 130012, China; abdan18@mails.jlu.edu.cn (A.A.); yue.liang@bofuconsulting.com (L.Y.); yexiao20@mails.jlu.edu.cn (X.Y.)

* Correspondence: gaorj@jlu.edu.cn; Tel.: +86-431-18604313058; Fax: +86-431-85155200

The gene sequence of Melac13220

ATGCGAAATCCCGACCCGACGCCCCAGCCCGCGCCGGGATCGTTCTCACGGCGCGATCTGCTCGCGGGCA
GCGCCGCCCTCGCCCTGATGCGCGGACGCGCCGCGGCCAAGCGCCGCGCGGAAGGCCCGCCCTCGGA
GCCGAAATCGATCAAGGCAGCACCGGCCACGCTCCGCCTGAAGCCCGAGCCCGCGCCTGAGACCGCCGTA
TGGCGTCTCGGCGAAGCGGAGGACCGATCCTGCGGGTCAAGCTCGGCGAGGCAATCCGCCTGCGCGTCG
AGAACGGGACCGACAAGCCGCTCTCGCTGCACTGGCACGGGGTGGCGATCGTCAACGCCATGGACGGCGT
CGGCGGCGTCAACCAGGAGCCGATCAAGCCGGGGGCGAGCTTACCTACGACTTCACGCCCCGGATGCC
GGCAGCTTCCTGATCCGCGCGCTCGTTGTGCGGGGTCGAGCGAGCCGTCGGGCCGGGGCATCGCCGGCA
TGCTGATCGTGACGAGCCCTCCCCGCCCCGGTTCGATGCAGACCTCGCCCTGCTCGTGCAGGATTGGCG
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TGCGGCTCGCCAATGCCTGCAACGCGCGCAGCCTGCGCATCCGCTTCGATGGGCTGAAGGCTTATGTCGC
GGCCGTGGACGGGCGAGCCGACCGACGTTTCGAGCCTCTGAAGGCGACACTCCCCTTCGCGCCGGGCACG
CGCTACGACCTGCTGCTCGATCTCCCGGCGCAGGCGGGACCGGCCGGCACGATCACCGCGCTGGTCGGGC
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TTTCGATACCGGGCTATGGACGAGTTTCGAGGTGAGTTGA

Citation: Ainiwaer, A.; Liang, Y.; Ye, X.; Gao, R. Characterization of a Novel Fe²⁺ Activated Non-Blue Laccase from *Methylobacterium extorquens*. *Int. J. Mol. Sci.* **2022**, *23*, 9804. <https://doi.org/10.3390/ijms23179804>

Academic Editors: Zhou Cheng and Guimin Zhang

Received: 26 July 2022

Accepted: 25 August 2022

Published: 29 August 2022

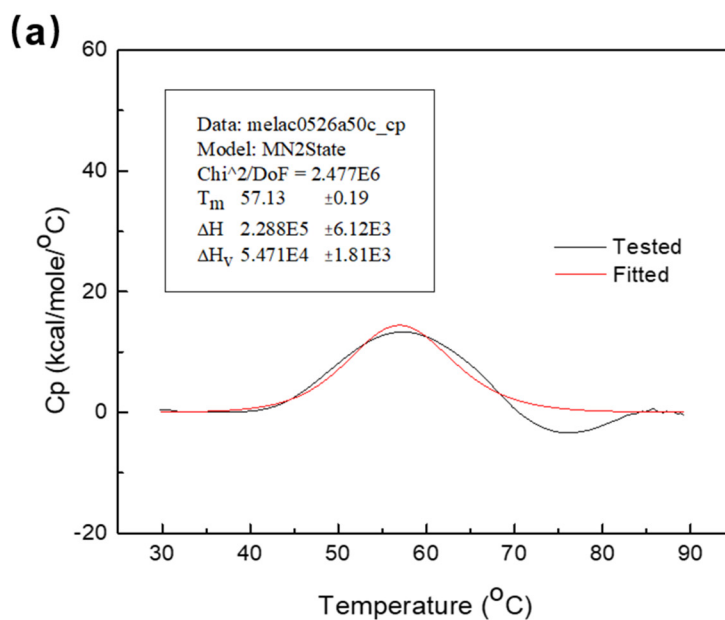
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The protein sequence of Melac13220

1 MRNPDPTAQP APGSFSRREL FAGSAALALM PRTAAQAQAPA
 41 GKAPPSEPKS IKAAPATLRL KPEPAPETAV WRLGEAEAPI
 81 LRVKLGEAIR LRVENGTDKP LSLHWHGVRI VNAMDGVGGV
 121 TQEPIKPGAS FTYDFTPPDA GSFLIRALVV GGSSEPSGRG
 161 IAGMLIVDEP SPPPVDADLA LLVQDWRLDE AGALQPFQGV
 201 AFAAAAGRLG SVVTNLNGRPI PLALDARPGS RLRLRLANAC
 241 NARSLRIRFD GLKAYVAAVD GQPTDTFEPL KATLPFAPGT
 281 RYDLLLDLPA QAGPAGTITA LVGQGLPLAT LTAVGEPVAQ
 321 SGRAAIGSIP ENKRLPAEIR LQSALRRELV LTGGVRPDKA
 361 KPGAETPYSG DPAKIWQING ASGTAGAAPL FSVKRGGVVV
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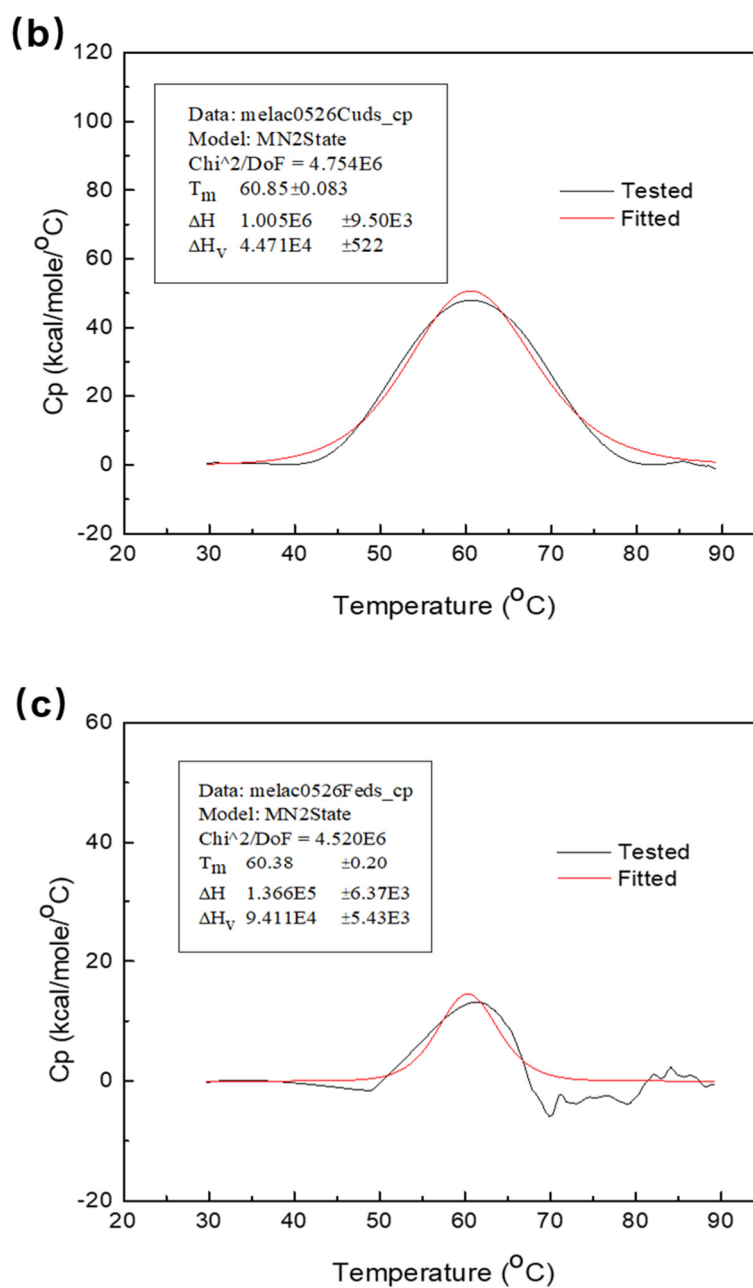


Figure S1. The curve of Differential Scanning Calorimetric. The melting temperature (T_m) and enthalpy of melting (ΔH_l) of purified Melac13220 **(a)**, after adding Cu^{2+} **(b)**, and Fe^{2+} **(c)**.