Supplemental Material

to

Discovery of a Linoleate 9*S*-Dioxygenase and an Allene Oxide Synthase in a Fusion Protein of *Fusarium oxysporum*

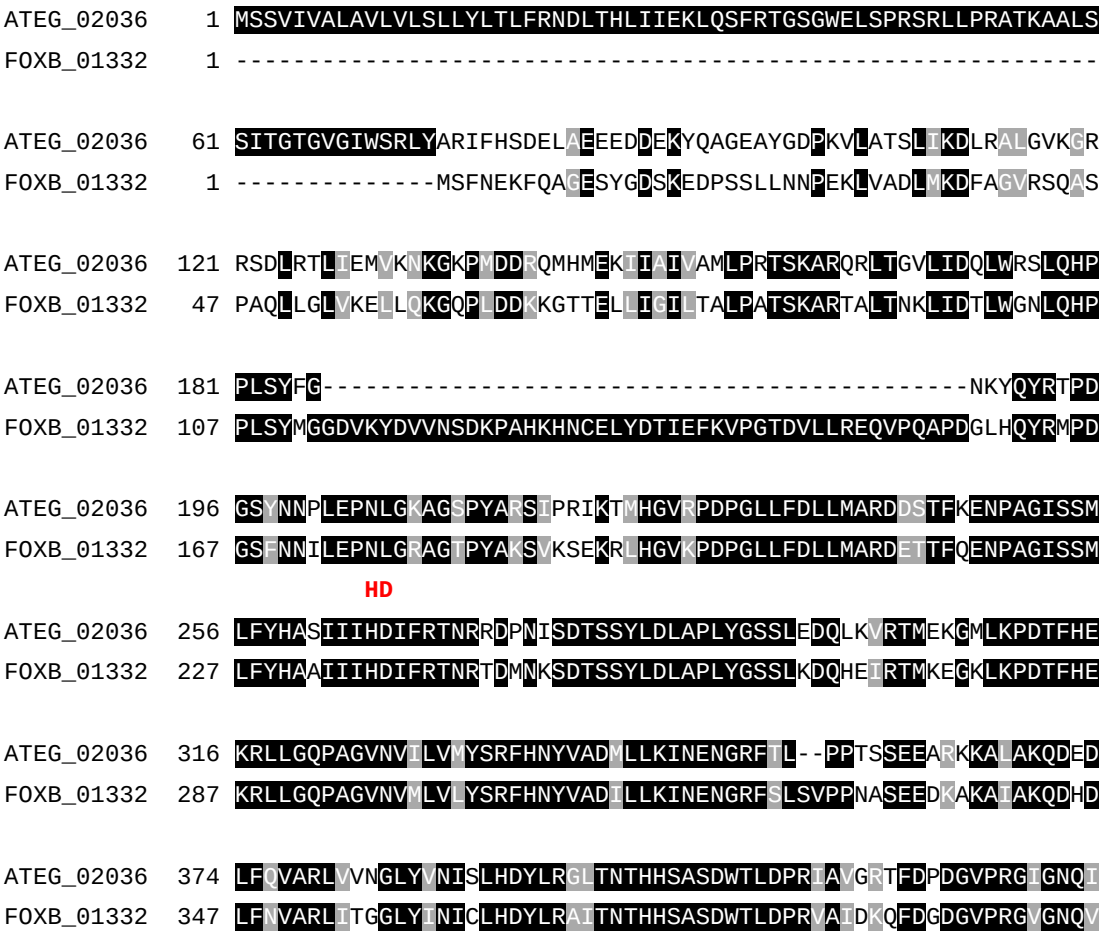
by

Inga Hoffmann and Ernst H. Oliw

Table S1. Oligonucleotides used for site-directed mutagenesis of FOXB_01332.

Oligonucleotides used for site-directed mutagenesis of 9*S*-DOX-AOS		
Replacement	**5'- Forward primer**	**5'- Reverse primer**
F416W	gagttcaatcttctctaccgctggcactcttgcatctccaagc	gcttggagatgcaagagtgccagcggtagagaagattgaactc
E946V	gttcctgtcactgctttctacgtggttctgtcgttcttccttc	gaaggaagaacgacagaaccacgtagaaagcagtgacaggaac
S949A	ctgctttctacgaggttctggcgttcttccttcgtccggag	ctccggacgaaggaagaacgccagaacctcgtagaaagcag
N921V	gttgcttgcgcaggggaatgtcgttgatcaggtcactgataac	gttatcagtgacctgatcaacgacattcccctgcgcaagcaac

Fig. S1.



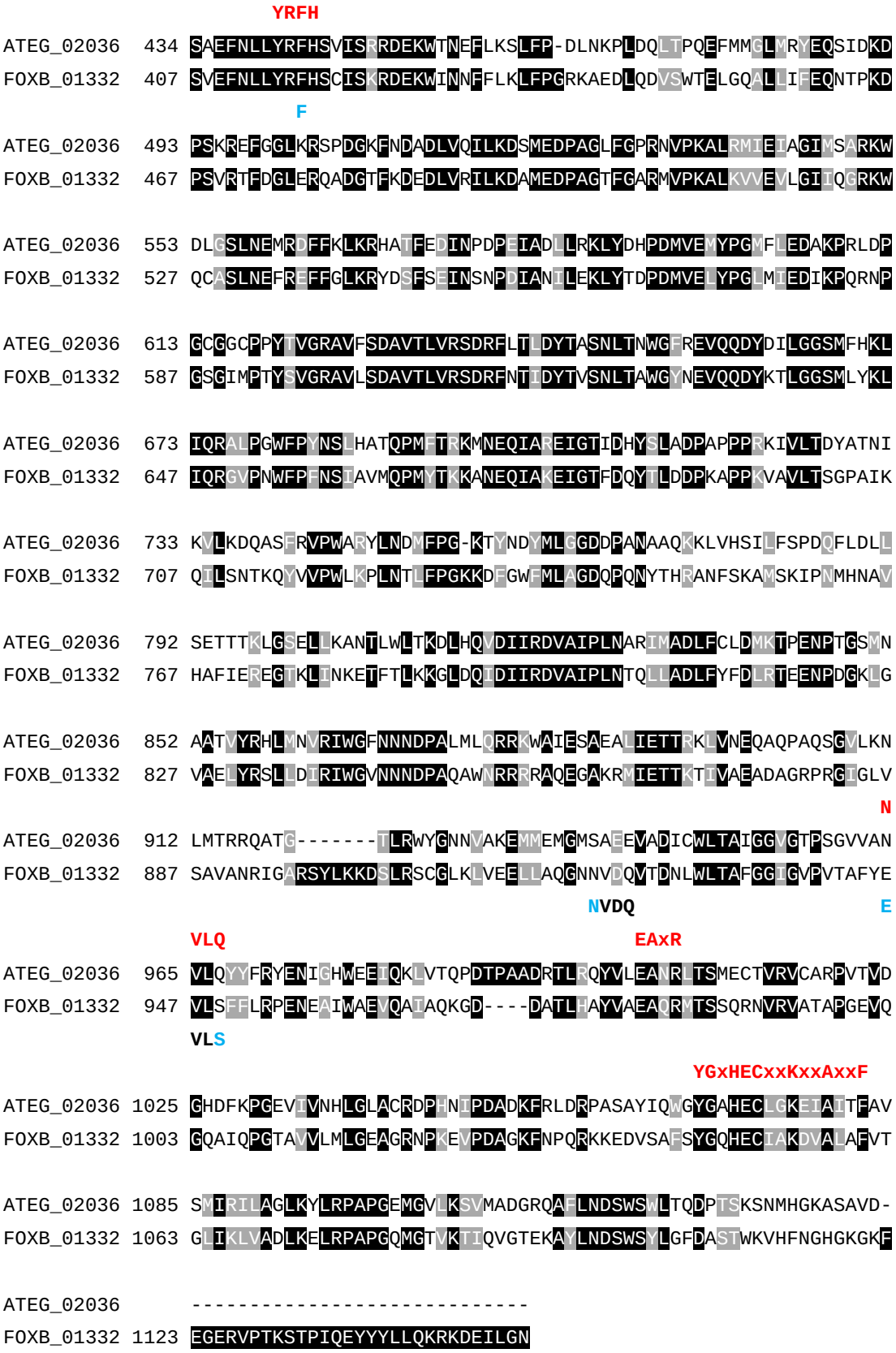


Fig. S1. Alignment of ATEG_02036 and FOXB_01332 by ClustalW algorithm, marked by Boxshade. Some conserved elements are marked in red above the alignment. The positions which were subject to site-directed mutagenesis are marked in blue letters below the alignment.

Fig. S2.

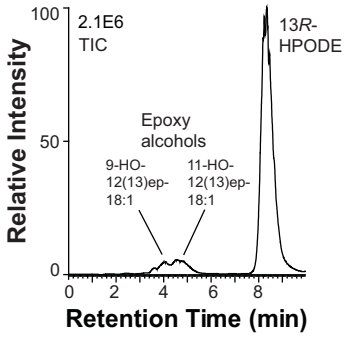


Fig. S2. RP-HPLC-MS/MS analysis of products formed by incubation of 13*R*-HPODE with 9S-DOX-AOS. The main products are two epoxyalcohols, which were formed in equal amounts as judged from the ion intensities of *m/z* 193 (9-hydroxy-12(13)epoxy-(10*E*)-octadecenoic acid) and *m/z* 197 (11-hydroxy-12(13)epoxy-(9Z)-octadecenoic acid) in the MS/MS analysis (*m/z* 311 → full scan).

Fig. S3.

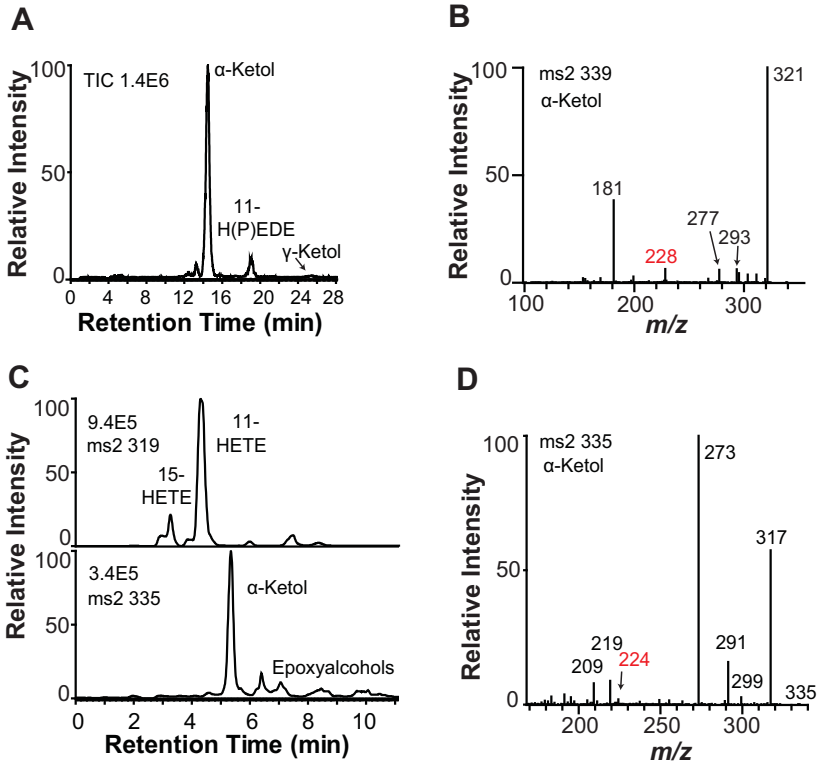


Fig. S3. Oxidation of 20:2n-6 and 20:4n-6 by 9S-DOX-AOS. A, NP-HPLC-MS/MS analysis of products formed from 20:2n-6. B, MS/MS spectrum of the α-ketol formed from 20:2n-6. C, NP-HPLC-MS/MS analysis of products formed from 20:4n-6. D, MS/MS spectrum of the α-ketol formed from 20:4n-6.