

NADP-ME1	MFSLNGTTFDNLSCGISRCLTTQSRKRVSVPMVV--VSSNGRAADGNVSILMENTLKE	58
NADP-ME5	MFSLNGSSFTNNSLSGVSRCLTQSC--RRVSAPMVVAAVSSNGKPGDGHVSVLVENALTES	59
NADP-ME3	-----MISFTIPNPLRKALGKRSSGRINIRVVMESTLKEL	35
NADP-ME2	-----	0
NADP-ME4	-----MESKMKEK	8
NADP-ME1	---VAVIEKDDFKSTVSGGVGDVYGEDTASEDQITPWTFSVASGYSLLRDPHYNKGGLAF	115
NADP-ME5	---PVPVEK-ETKSTVTGGVGDVYGEDSATEDQSITPWTLSVASGFSLLRNPHYNKGGLAF	115
NADP-ME3	SNGESVLDV-KDKCGVGGGVEDLYGEDRATEDQITPWTFSVASGYSLLRDPHYNKGGLAF	94
NADP-ME2	-----MESTLKEQIPAGGVEDVYGEDCATEDQCITPWTIAVSSGYNLLRDPHYNKGGLAF	54
NADP-ME4	S--ESVVDMSPTSAVVEGGVEDIYGEDCATEDQLITPWTFOVSSGYNLLRDPHYNKGGLAF	66
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	Putative nitration	
NADP-ME1	SEKERDSHYLSGLLPPVVVDQELQVKVMNVLRQYDVPLQRYMAMMDLQERNERLIFYKLL	175
NADP-ME5	SERERDTHYLRGLLPPVVITHDLQVKMMNSIRKYDVPLQRYMAMMDLQEMNERLIFYKLL	175
NADP-ME3	TDARDAHYLRGLLPPSVSNQELQEKVMHNRLRYQVPLQRYMAMMDLQERNERLIFYKLL	154
NADP-ME2	TERERDAHYLRGLLPPVVSTQELQEKKLMQSIQYDPLHKYVAMMELEBNERLIFYKLL	114
NADP-ME4	TEQERDVHYLRGLLPPAVMPQELQEKRLMQTLRRYEVPLNKYVALMELQERNERLIFYKLL	126
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	NADP-binding site	
NADP-ME1	MENVEELLPIVYTFVTGEACQKYGSIFRKPQGLFISLKEKGKILEVLKNWPEKKIQIVIV	235
NADP-ME5	IDNVEELLPIVYTPVTGEACQKYGSIFRKPQGLFISLKEKGKIHVLKNWPEKKIQIVIV	235
NADP-ME3	IDNVEELLPVVYTPVTGEACQKYGSIFRKPQGLFISLKEKGKILEVLKNWPEKSIQIVIV	214
NADP-ME2	IDNVEELLPIVYTPVTGEACQKYGSIFRKPQGLYISLKEKGKILEVLKNWPEKSIQIVIV	174
NADP-ME4	IDNVEELLPIVYTPVTGEACQKYGSIFRKPQGLYISLKEKGKILEVLKNWPERKIQIVIVI	186
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	NADP-binding site	
NADP-ME1	TDGERILGLGDLGCQGMGIPVGKLSLYTALGGIRPSACLPTIDVGTNNKELLEDEFYIG	295
NADP-ME5	TDGERILGLGDLGCQGMGIPVGKLSLYTALGGIRPSACLPTIDVGTNNMNLNDEFYIG	295
NADP-ME3	TDGERILGLGDLGCQGMGIPVGKLSLYTALGGVRPSVCLPITIDVGTNNQQLLDDEFYIG	274
NADP-ME2	TDGERILGLGDLGCQGMGIPVGKLALYTALGGVRPSACLPTIDVGTNNKELNDEFYIG	234
NADP-ME4	TDGERILGLGDLGCQGMGIPVGKLALYTALGGVRPSACLPTIDVGTNNQQLNDEFYIG	246
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	Metal-binding residues	
NADP-ME1	LRQRRARGQEYAEELLDEFMSSVKQTYGEKVLIQFEDFANHNAFDLLEKYGTSHLVFNDDI	355
NADP-ME5	LRQRRATGQEYAEELLDEFMYAVKQNYGEKVLIQFEDFANHNAFDLLAKYGTSHLVFNDDI	355
NADP-ME3	LKQKRARGQEYAEELLDEFMSAVKQNYGERVLIQFEDFANHNAFELLAKYRTHLVFNDDI	334
NADP-ME2	LRQNRATGQEYYDFLHEFMSAVKQNYGEKILIQFEDFANHNAFELLAKYRTHLVFNDDI	294
NADP-ME4	LRQKRATGKEYHDFLDEFMKAVKQNYGEKVLIQYEDFANHNAFELLAKYGTSHLVFNDDI	306
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NADP-ME1	QGTASVVLAGLMAALNLVGGNLQAHTFLFLGAGEAGTGIAELIALEMSK-----QTGAPL	410
NADP-ME5	QGTASVVLAGLMAALNLVGGTLAHTFLFLGAGEAGTGIAELIALEMSKQFLVLTGTIPL	415
NADP-ME3	QGTASVVLAGLIASLKLGGTLADHTFLFLGAGEAGTGIAELIALEITK-----KTSVPL	389
NADP-ME2	QGTASVVLAGLIASLKLGGALCDHTFLFLGAGEAGTGIAELIALEISK-----KTNTPV	349
NADP-ME4	QGTAAVVLAGLVASLKLGGSLADHTFLFFGAGEAGTGIAELIALAISK-----KTNAVP	361
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NADP-ME1	EETRKKIWMVDSKGLIVSRMESLQHFKMPWAHDHEPVKELVNAVKLKPTILIGSSGTG	470
NADP-ME5	EETRKKIWMVDSKGLIVKSRMEMLQHFKRPWAHDHEPVKELVNAVKSIKPTVLIGSSGTG	475
NADP-ME3	EVARKKIWLVDKGLIVSRRVESLQHFKKPWAHDHEPVKELIDAVKAIKPTVLIGTSGVG	449
NADP-ME2	EETRKKIWLVDKGLIVSRRKGTQAFKKPWAHEHEPVNNLLDAVKAVKPSVLIGTSGVG	409
NADP-ME4	EEARKKIWLVDKGLIVSRRKESLQAHKKPWAHEHEPVNNLLDTVKAIKPTAIIGTSGVG	421
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NADP-ME1	KTFTEKVVRTIATFNKFMVQKPVIFALSNPTSQSECTAEAEYTWSDGRAIFASGSPFAPV	530
NADP-ME5	RTFTKEVVQAMATFN---EKPIIFALSNPTSQSECTAEAEYSWSEGRAIFASGSPFAPV	531
NADP-ME3	KTFTEKVVVEAMASLN---PKPLVMALSNPTSQAECTAEAEYTWKSGHAIFASGSPFPDF	505
NADP-ME2	RTFTKEVVVEAMASMN---ERPLIMALSNPTSQAECTAEAEYTWSEGRAVFASGSPFPDF	465
NADP-ME4	RTFTKEVIEAMASIN---KRPLIMALSNPTEQSECTAEAEYAWSEGRAVFASGSPFPV	477
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NADP-ME1	EYEGKVFMSGQANNAYIFPGLGLLIISGAIRVHDDMLLAASEALAAEVSKENFEKGLIY	590
NADP-ME5	EYKGVVYASGQANNAYIFPGFGLGLIISGAIRVHDDMLLVASEALAEQVSQENFEKGLIY	591
NADP-ME3	EFEGRFTVSGQANNAYIFPGFGLGLIIMSGTIRVHDDMLLAASEALAAEVTEDDYLGKRIY	565
NADP-ME2	EYNKLYFPQANNACYIFPGFGLVMSGTIRVHDDMLLAASEALAAQVTDDEHYAKGMIY	525
NADP-ME4	EYNNKLHIPSQANNACYIFPGFGLVMAIRVHNDMLLAASEALAGQVTEHYVKGIIY	537
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NADP-ME1	PPFANIRKISAHIAAKVAAKAYELGLATRLPQPENLVSYAESCMYSPSYRSYR	643
NADP-ME5	PPFANIRKISAHIAAKVAAKAYELGLATRLPEPKDLIAYAESCMYSPAYRSYR	644
NADP-ME3	PPFTNIRKISAHIAAEVAAKAYELGLATHLPRPKDLVKYAESCMYTPVYRHYR	618
NADP-ME2	PPFADIRKISAHIAARVAAKAYELGVATRLPRPADLVKYAESCMYTPNYSYR	578
NADP-ME4	PPFGIIRKISAHIAANVAARAYGLVATRLPPADLVKYAESCFYSPNYRCYR	590
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Supplementary Figure S1. Alignment of the five NADP-ME sequences from pepper identifying the conserved NADP (blue) and metal binding (green) sites, and the possible tyrosine (Y) residue capable of being nitrated (orange). Asterisks denote the shared amino acids among all NADP-MEs.