Table S1. List of species and GenBank accession numbers used for the phylogenetic tree construction of the *Penicillium rubens* LBM 081 isolate. The analysis was performed by concatenating the sequences of the ITS1-5.8S-ITS2, β-tubulin (Bt), and rpb2 regions, using the Neighbor-Joining (NJ) method with the Kimura two-parameter substitution model.

Species	Type name	ITS	Bt	Rpb2
Penicillium rubens	CBS 197.46	JX996663.1	JF909945.1	JF909927.1
Penicillium rubens	CBS 205.57	JX996664.1	JF909954.1	JX996664.1
Penicillium rubens	CBS 307.48	JX996669.1	JF909944.1	JX996669.1
Penicillium rubens	CBS 319.59	JX996671.1	JX996928.1	JX996671.1
Penicillium vanluykii	DTO 148I2	JX996615.1	JX996879.1	JX996615.1
Penicillium vanluykii	DTO 149A4	JX996623.1	JX996887.1	JX996623.1
Penicillium vanluykii	DTO 149B3	JX996631.1	JX996895.1	JX996631.1
Penicillium chrysogenum	CBS 306.48	JN121487.1	JF909955.1	JN121487.1
Penicillium chrysogenum	CBS 259.29	JX996665.1	JX996924.1	JX996665.1
Penicillium chrysogenum	CBS 314.48	JX996670.1	JX996927.1	JX996670.1
Penicillium chrysogenum	DTO 98F1	JX996660.1	JX996921.1	JX996660.1
Penicillium chrysogenum	DTO 149A2	JX996621.1	JX996885.1	JX996621.1
Penicillium chrysogenum	DTO 149B5	JX996633.1	JX996897.1	JX996633.1
Penicillium allii-sativi	DTO 149A8	JX996627.1	JX996891.1	JX996627.1
Penicillium allii-sativi	DTO 149B2	JX996630.1	JX996894.1	JX996630.1
Penicillium mononematosum	CBS 172.87	JX996709.1	JF909953.1	JF909935.1
Penicillium mononematosum	CBS 109616	JX996690.1	JX996826.1	JX996690.1
Penicillium mononematosum	CBS 112104	JX996700.1	JX996834.1	JX996700.1
Penicillium flavigenum	CBS 419.89	JN406551.1	AY495993.1	JF909939.1
Penicillium flavigenum	CBS 110411	JX996694.1	JX996830.1	JX996694.1
Penicillium flavigenum	CBS 110407	JX996692.1	JX996828.1	JX996692.1
Penicillium flavigenum	CBS 110406	JX996691.1	JX996827.1	JX996691.1
Penicillium flavigenum	DTO 149C7	JX996683.1	JX996819.1	JX996683.1
Penicillium desertorum	DTO 148I6	JX996682.1	JX996818.1	JX996682.1

Penicillium desertorum	DTO 148I5	JX996681.1	JX996817.1	JX996681.1
Penicillium desertorum	DTO 015H9	JX996684.1	JX996820.1	JX996684.1
Penicillium desertorum	DTO 16B5	JX996685.1	JX996821.1	JX996685.1
Penicillium dipodomyis	CBS 110412	JF909932.1	JF909950.1	JX996695.1
Penicillium dipodomyis	CBS 170.87	JX996707.1	JX996841.1	JX996707.1
Penicillium dipodomyis	CBS 110415	JX996698.1	JX996833.1	JX996698.1
Penicillium dipodomyis	CBS 112570	JX996704.1	JX996838.1	JX996704.1
Penicillium nalgiovense	CBS 352.48	JX996719.1	KU896811.1	JN406560.1
Penicillium nalgiovense	CBS 318.92	JX996717.1	AY496000.1	JX996717.1
Penicillium lanosocoeruleum	CBS 215.30	JX996712.1	KU896817.1	JX996712.1
Penicillium lanosocoeruleum	CBS 484.84	JX996723.1	MT328504.1	JX996723.1
Penicillium egyptiacum	CBS 244.32	JN406598.1	KU896810.1	JX996714.1
Penicillium egyptiacum	CBS 867.70	JX996728.1	JX996858.1	JX996728.1
Penicillium egyptiacum	CBS 137.70	JX996706.1	JX996840.1	JX996706.1
Penicillium kewense	CBS 183.72	JX996710.1	JX996842.1	JX996710.1
Penicillium kewense	CBS 344.61	JX996718.1	KU896816.1	JF417428.1
External group				
Penicillium griseofulvum	CBS 185.27	JN121449.1	JF909942.1	JF909924.1