



# Identification of serine/threonine kinase and nucleotide-binding site-leucine-rich repeat (NBS-LRR) genes in the fire blight resistance quantitative trait locus of apple cultivar 'Evereste'

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Titre	Identification of serine/threonine kinase and nucleotide-binding site-leucine-rich repeat (NBS-LRR) genes in the fire blight resistance quantitative trait locus of apple cultivar 'Evereste'
Type de publication	Article de revue
Auteur	Parravicini, Gabriella [1], Gessler, Cesare [2], Denancé, Caroline [3], Lasserre-Zuber, Pauline [4], Vergne, Emilie [5], Brisset, Marie-Noëlle [6], Patocchi, Andrea [7], Durel, Charles-Eric [8], Broggin, Giovanni AL [9]
Editeur	Wiley
Type	Article scientifique dans une revue à comité de lecture
Année	2011
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Titre de la revue	Molecular Plant Pathology
ISSN	1364-3703
Résumé en anglais	<p>Fire blight is the most destructive bacterial disease affecting apple (<i>Malus domestica</i>) worldwide. So far, no resistance gene against fire blight has been characterized in apple, despite several resistance regions having been identified. A highly efficacious resistance quantitative trait locus (QTL) was localized on linkage group 12 (LG12) of the ornamental cultivar 'Evereste'. A marker previously reported to be closely linked to this resistance was used to perform a chromosome landing. A bacterial artificial chromosome (BAC) clone of 189 kb carrying the fire blight resistance QTL was isolated and sequenced. New microsatellite markers were developed, and the genomic region containing the resistance locus was limited to 78 kb. A cluster of eight genes with homologies to already known resistance gene structures to bacterial diseases was identified and the corresponding gene transcription was verified. From this cluster, two genes were recognized in silico as the two most probable fire blight resistance genes showing homology with the Pto/Prf complex in tomato.</p>
URL de la notice	<a href="http://okina.univ-angers.fr/publications/ua7772">http://okina.univ-angers.fr/publications/ua7772</a> [10]
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