

Table 2 BLASTn results from NCBI database showing accessions of closest putative ortholog producing significant alignment with putative carotenoid sequences of cassava

Enzyme name/ Gene symbol	NCBI Accession	Description	Query coverage	E-value	Identity
Beta-carotene hydroxylase (HYDB1)	GU120076.1	<i>Manihot esculenta</i> beta-carotene hydroxylase (bHyd) mRNA, partial	37%	8e-63	100% (138/138) (49/54)
	EF568375.1	<i>Manihot esculenta</i> beta-carotene hydroxylase 2 (bHyd) mRNA, partial	38%	4e-41	89% (121/136) (58/65)
Lycopene beta cyclase (LYCB)	GU120074.1	<i>Manihot esculenta</i> lycopene beta-cyclase (Lycb) mRNA, partial cds	100%	0.0	99% (465/469)
	EF568376.1	<i>Manihot esculenta</i> lycopene beta-cyclase (lycb) mRNA, partial cds	100%	0.0	98% (464/469)
Phytoene synthase (PSY1)	XM_002527022.1	<i>Ricinus communis</i> Phytoene synthase, chloroplast precursor, putative, mRNA	69%	2e-53	84% (181/221), (157/193), (65/77)
	GU111715.1	<i>Manihot esculenta</i> cultivar CM3306-4 phytoene synthase 2 (PSY2) gene, PSY2-W-1 allele, complete cds	32%	1e-24	72% (166/229)
Lycopene epsilon cyclase (LYCE)	XM_002514090.1	<i>Ricinus communis</i> Lycopene epsilon cyclase, chloroplast precursor, putative, mRNA	66%	4e-48	86% (220/294) Gaps = 24/294 (37/43) Gaps = 0/43
	AF117257.1	<i>Arabidopsis thaliana</i> lycopene epsilon cyclase gene, complete cds	69%	3e-48	74% (251/337)