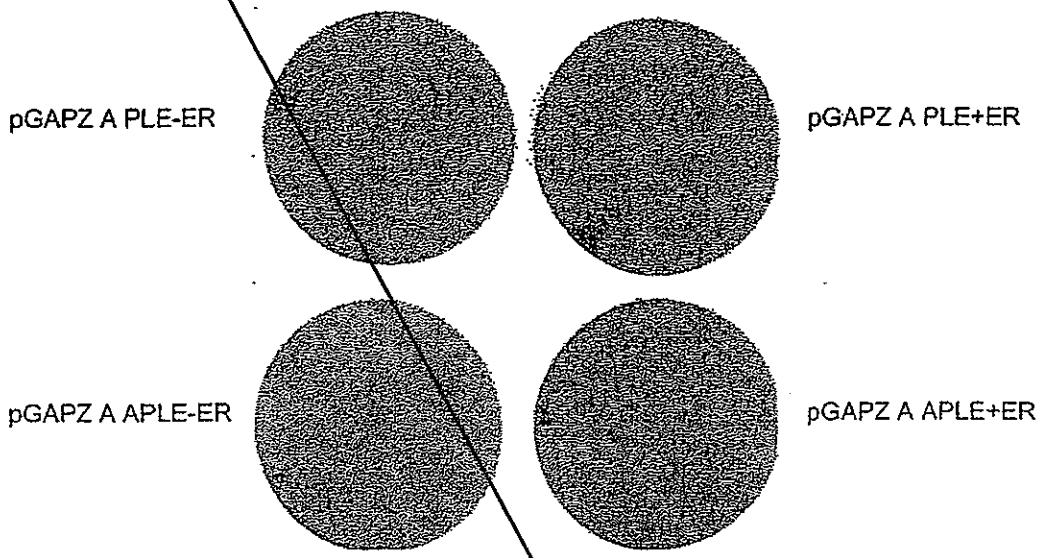
Figure 1: Stereoselective esterase activity on methyl 5-chloro-2-(1-methylethyl)-4-pentenoate

A: Activity on the racemic substrate: *P. pastoris* X-33 transformants




B: Activity on the racemic substrate vs. (S) enantiomer

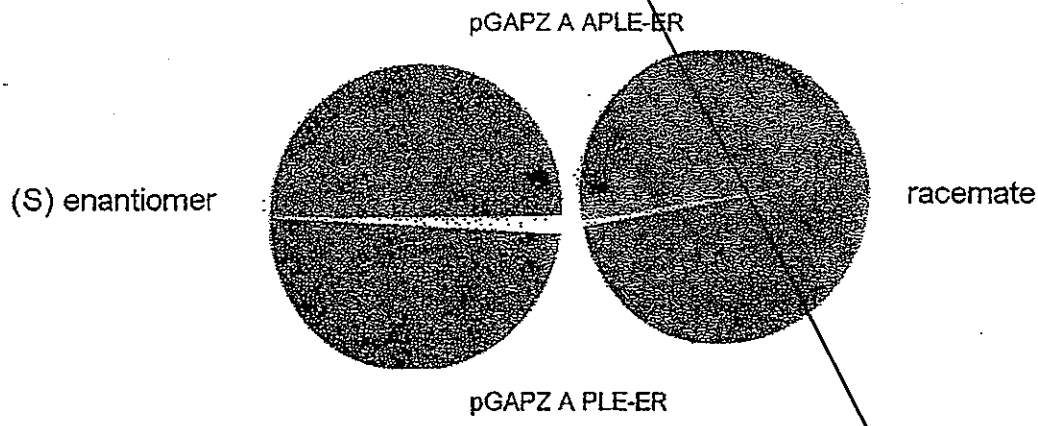
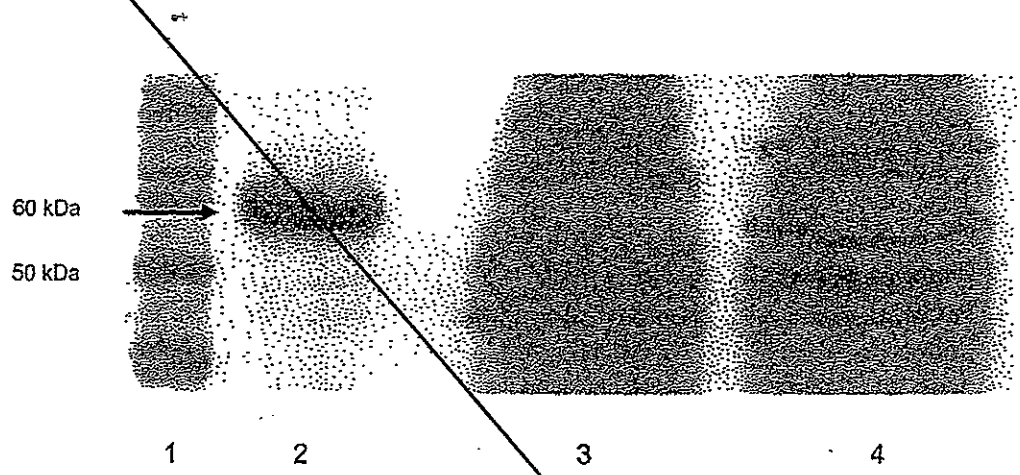


Figure 2: SDS-PAGE of recombinant APLE



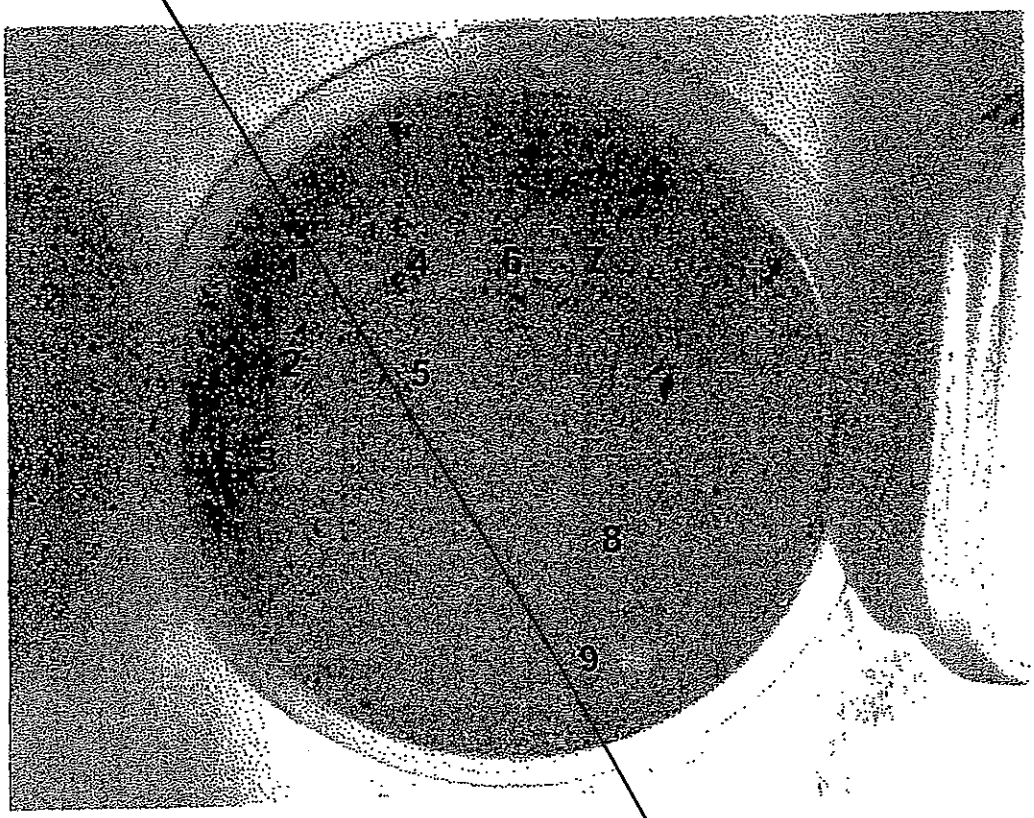

1: Page Ruler Protein Ladder (Fermentas)

2: Commercially available PLE

3: *P. pastoris* X-33 with integrated pGAPZ A (control strain)

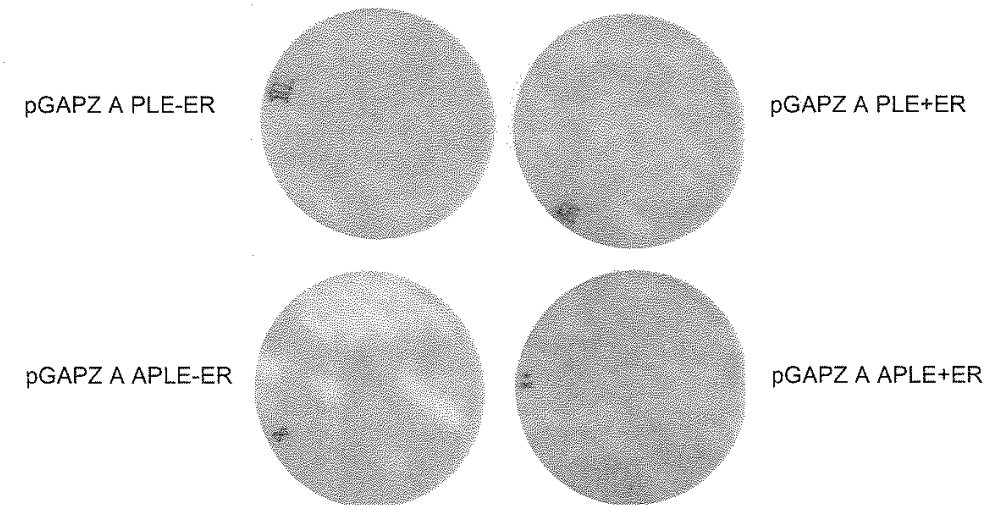
4: *P. pastoris* X-33 with integrated pGAPZ A APLE-ER

Figure 3: Induced expression of pig liver esterases with the AOX1 promoter




1: *P. pastoris* KM71 with integrated pPIC9 APLE-ER
2: *P.* pastoris KM71 with integrated pPIC9 APLE-ER
3: P. pastoris KM71 with integrated pPIC9 APLE-ER
4: P. pastoris KM71 with integrated pPIC9 APLE+ER
5: P. pastoris KM71 with integrated pPIC9 APLE+ER
6: P. pastoris KM71 with integrated pPIC9 PLE-ER
7: P. pastoris KM71 with integrated pPIC9 PLE+ER
8: P. pastoris KM71
9: Commercially available PLE

**A**


pGAPZ A PLE-ER
pGAPZ A PLE+ER
pGAPZ A APLE-ER
pGAPZ A APLE+ER

**B**

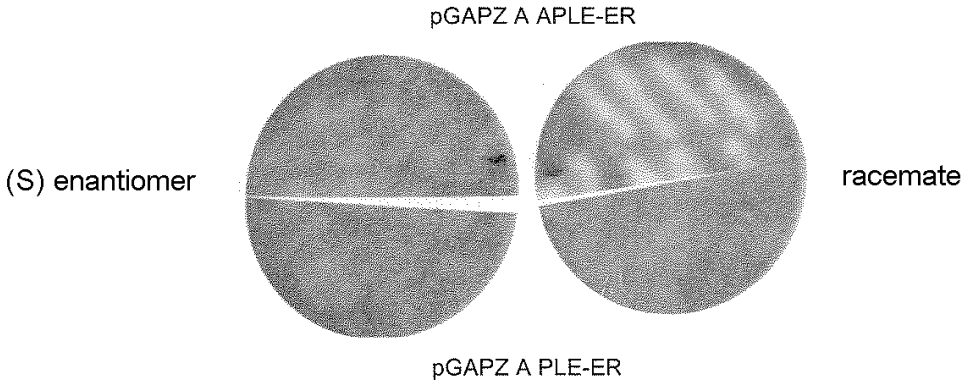

pGAPZ A APLE-ER
(S) enantiomer
racemate
pGAPZ A PLE-ER

**Figure 1**

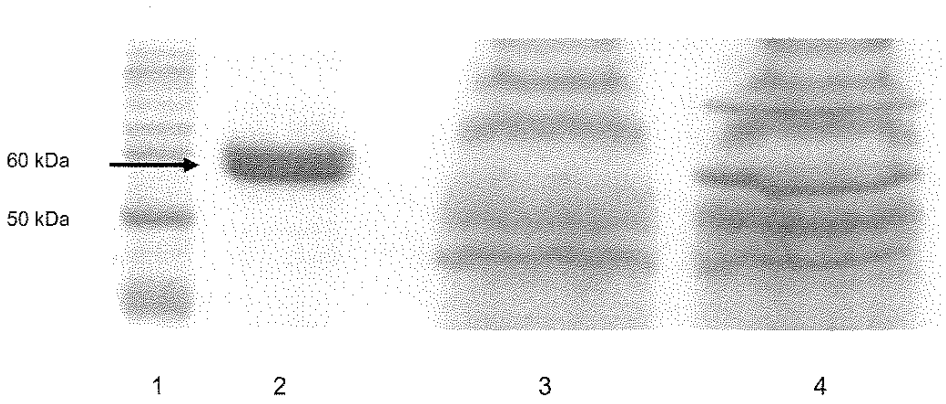



**Figure 2**

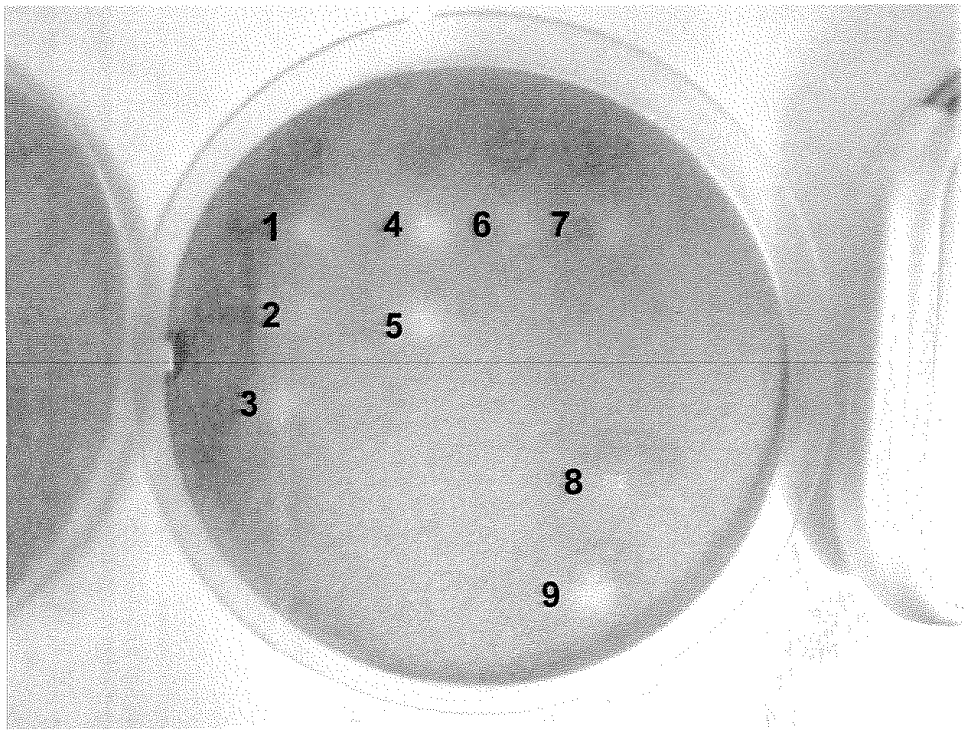



**Figure 3**