

# Enzyme Data

<b>BCC-Nr.</b>	<b>013</b>																																																										
<b>Enzyme</b>	<b>Lipase</b>																																																										
<b>EC-No.</b>	<b>3.1.1.3</b>																																																										
<b>T<sub>opt</sub></b>	75°C, recommendend 40-90°C																																																										
<b>pH<sub>opt</sub></b>	7.0, recommended 6.5-10.0																																																										
<b>Stability</b>	t <sub>1/2</sub> (80°C) = 2h																																																										
<b>Activity and substrate specificity</b>	11 U/mg, K <sub>M</sub> 1.23 (pNP-palmitate),																																																										
<b>Additives</b>	<p><b>Activity in organic solvents</b></p> <table border="1"> <thead> <tr> <th><u>Solvent</u></th> <th><u>Concentration</u></th> <th><u>Rel. Activity [%]</u></th> </tr> </thead> <tbody> <tr> <td rowspan="3">tert-Butanol</td> <td>25 %</td> <td>150</td> </tr> <tr> <td>50 %</td> <td>120</td> </tr> <tr> <td>99 %</td> <td>118</td> </tr> <tr> <td rowspan="3">Ethanol</td> <td>25 %</td> <td>94</td> </tr> <tr> <td>50 %</td> <td>134</td> </tr> <tr> <td>99 %</td> <td>127</td> </tr> <tr> <td rowspan="3">Acetonitrile</td> <td>25 %</td> <td>109</td> </tr> <tr> <td>50 %</td> <td>112</td> </tr> <tr> <td>99 %</td> <td>100</td> </tr> <tr> <td rowspan="3">Isopropanol</td> <td>25 %</td> <td>95</td> </tr> <tr> <td>50 %</td> <td>107</td> </tr> <tr> <td>99 %</td> <td>111</td> </tr> <tr> <td rowspan="3">Pyridine</td> <td>25 %</td> <td>109</td> </tr> <tr> <td>50 %</td> <td>98</td> </tr> <tr> <td>99 %</td> <td>97</td> </tr> <tr> <td rowspan="6">DMSO</td> <td>1 %</td> <td>73</td> </tr> <tr> <td>5 %</td> <td>91</td> </tr> <tr> <td>10%</td> <td>107</td> </tr> <tr> <td>25 %</td> <td>90</td> </tr> <tr> <td>50 %</td> <td>96</td> </tr> <tr> <td>99 %</td> <td>1</td> </tr> <tr> <td rowspan="3">Acetone</td> <td>25 %</td> <td>97</td> </tr> <tr> <td>50 %</td> <td>107</td> </tr> <tr> <td>99 %</td> <td>104</td> </tr> </tbody> </table>	<u>Solvent</u>	<u>Concentration</u>	<u>Rel. Activity [%]</u>	tert-Butanol	25 %	150	50 %	120	99 %	118	Ethanol	25 %	94	50 %	134	99 %	127	Acetonitrile	25 %	109	50 %	112	99 %	100	Isopropanol	25 %	95	50 %	107	99 %	111	Pyridine	25 %	109	50 %	98	99 %	97	DMSO	1 %	73	5 %	91	10%	107	25 %	90	50 %	96	99 %	1	Acetone	25 %	97	50 %	107	99 %	104
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	Dimethylformamide	25 %	108
		50 %	96
		99 %	49
	Methanol	25 %	103
		50 %	101
		99 %	50
	Hexadecane	99%	63
	Heptane	99 %	71
	n-Hexane	99%	72
	Isooctane	99 %	54
	Amyl alcohol	99 %	51
	n-Decyl alcohol	99 %	26
	Toluol	99 %	13
Benzene	99 %	4	
Polyvinylalcohol	1% (v/v)	100	
	5% (v/v)	104	
	10% (v/v)	114	

### Influence of activators and inhibitors

Compound	Concentration	Rel. Activity [%]
PMSF	0.1 mM	6
	1.0 mM	0
Pefablock	0.1 mM	3
	1.0 mM	0
CHAPS	1% (v/v)	126
	5% (v/v)	115
	10% (v/v)	111