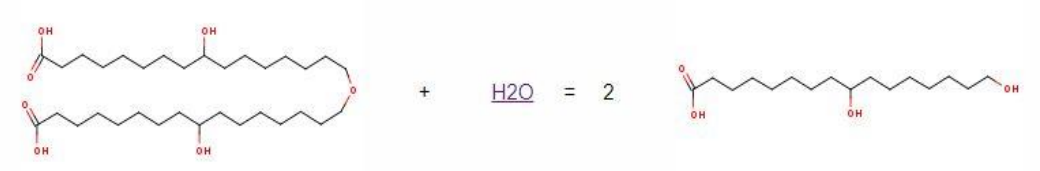
Cutinase Fs

EC 3.1.1.74

Beschreibung: Enzympräparat zur Hydrolyse von Cutin und anderen Estern. Cutin (Polyester aus Hydroxy- und Hydroxy-Epoxyfettsäure) wird in die entsprechenden Monomere gespalten.

Katalysierte Reaktion:



Cutin + *H_2O* → *2 Cutin Monomere*

Herkunft: *Fusarium solani*, exprimiert in *Arxula adeninivorans*

Aktivität: > 30 000 U/ g (pH 7,0; 37°C; Glycerintributyrat als Substrat)

Spezifische Aktivität: > 3 000 U/ mg Protein

Anwendung: Spaltung von Cutin; organische Synthese (s. Tab. 1)

Reaktionsparameter:			
	pH–Wert	Optimum: 6 - 9	aktiv im Bereich pH 5 - 10
	Temperatur	Optimum: 25 - 50°C	aktiv im Bereich 20 - 60°C

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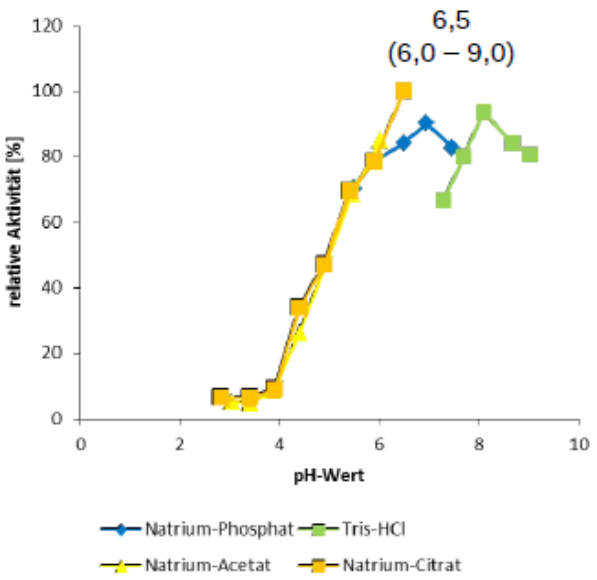

Abb. 1: pH-Abhängigkeit der Cutinase Fs

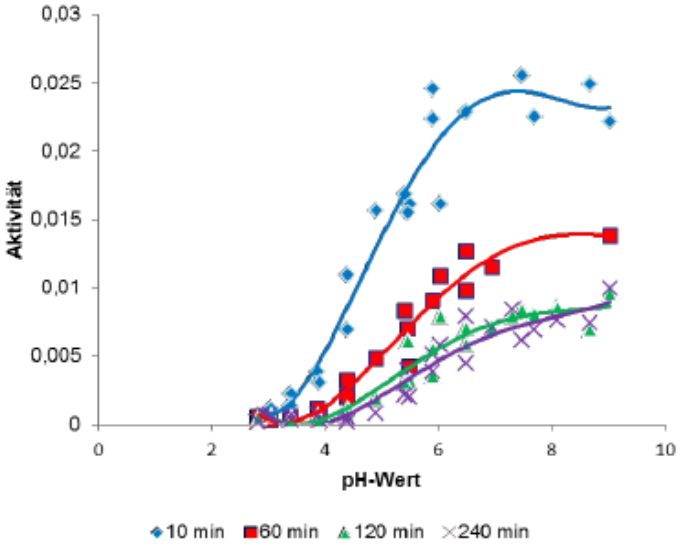

Abb. 2: pH-Stabilität der Cutinase Fs

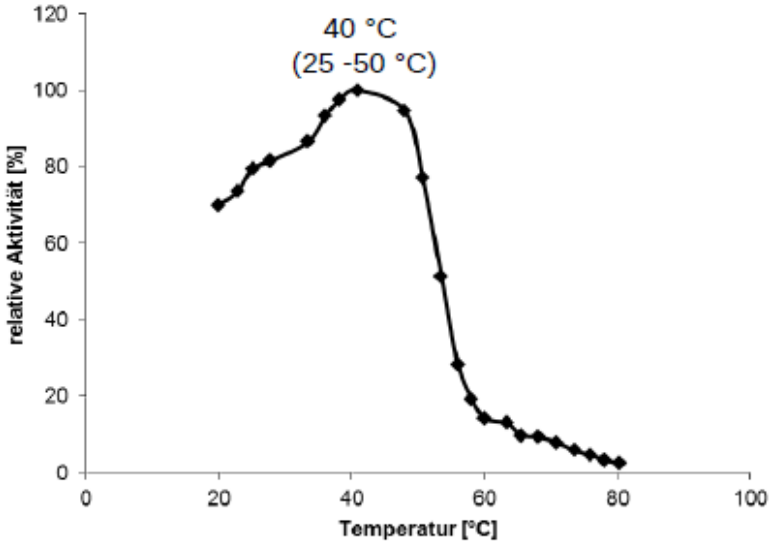

Abb. 3: Temperatur-Abhängigkeit der Cutinase Fs

Artikel-Nr.:	2460
Lieferform:	Teilgereinigtes Lyophilisat

Lagerung: - 20°C

Tab. 1: Einsatz von Cutinasen in der Biokatalyse

(nach Carvalho et al., 1998b)

Reaktion	Substrat	Enzympräparation/Reaktionsansatz	Referenz.
Hydrolyse	Triolein	Reverse Micellen AOT/Isoktan	Melo et al., 1995b
		Triolein/Wasser	Flipsen et al., 1996
	Tricaprylin	Immobilisierung an Zeolithen	Gonçalves et al., 1996a
		Calciumalginat	Gonçalves et al., 1995
		Kovalente Bindung an porösem Silicat	Gonçalves et al., 1996b
	p-nitrophenyl valerat	Micellen mit SDS/Triton X100	Pocalyko and Tallman, 1998
	p-nitrophenyl palmitat	Immobilizierung an Dextran und Silica-Derivate	Gonçalves et al., 1998a
	Methyl-,ethyl-, propylpropionat	Gas/Festphasensystem	Lamare et al., 1997
Estersynthese	Ölsäure+Hexanol	Reverse Micellen AOT/Isoktan	Sebastiãoet al., 1993, Sebas tião et al., 1992
	Caprylsäure + Butanol	Organische Lösungsmittel	Sarazin et al., 1992, Sarazin et al., 1995
	Caprylsäure + Butanol	Organische Lösungsmittel	Sarazin et al., 1992, Sarazin et al., 1995
	Buttersäure + 2-Butanol	Phosphatidylcholin/ Isoktan, Reverse Micellen	Pinto-Sousa et al., 1994
	Ölsäure + Glycerin	Organische Lösungsmittel	Melo et al., 1995a
	Hexansäure + Hexanol	CTAB, Reverse Micellen	Cunnah et al., 1996
		Immobilisierung an Accurel EP 100	Sereti et al., 1997
	Buttersäure + Hexanol	Immobilisierung an Accurel EP 100	Sjursnes et al., 1998
	Laurinsäure + Pentanol	Reverse Micellen AOT/Isoktan	Papadimitriou et al.,1996
Umesterung	Methylpropionat+Propanol	Gas/Festphasensystem	Lamare and Legoy, 1995, Lamare et al., 1997
	Butylacetat+Hexanol	Reverse Micellen AOT/Isoktan	Carvalho et.al 1997a, Carvalho et al., 1998a
		Reverse Micellen CTAB/Isoktan	Cunnah et al., 1996
		Immobilisierung an Zeolithen	Serralha et al., 1998

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