

Recombinant Enzyme Product Specification Sheet

Cat. No.:	PRO-E0268	
LOT:	2009-0268	
Activity:	Hyaluronate lyase	
Synonyms:	Hyaluronidase; glucuronoglycosaminoglycan lyase; spreading factor; mucinase	
Nomenclature:	CAZY [PL16, polysaccharide lyase family 16 (formerly known as glycoside hydrolase family GH69)]	
Source organism:	<i>Streptococcus equi</i> 4047	
Enzyme Commission No.:	4.2.2.1	
Activity:	8 U/mL	} (37°C; pH 6.0; 1 mg/mL hyaluronic acid)
Specific activity:	4.6 U/mg	
Purity:	> 95 % as judged by SDS-PAGE	
Form and storage:	Supplied in 3.2 M ammonium sulphate, store at 4°C (shipped at room temperature)	
pH optimum:	~ 6.0	
Temperature optimum:	37.0°C (stable up to 37.0°C)	
[Protein]:	1.73 mg/mL	
Sequence length:	372 amino acids (view sequence)	
Accession No.:	SEQ2045 (not annotated as of 18/02/09)	
Molecular weight:	38447.1 Da	(theoretical)
	~ 38000 Da	(observed by SDS-PAGE)
	-	(observed by mass spectrometry)
Biological function:	SEQ2045 is a phage tail-fibre protein responsible for the digestion of the <i>S. equi</i> hyaluronan capsule during phage infection and is a key bacteriophage-encoded virulence factor that is produced during equine infection	
Potential application(s):	Carbohydrate research , fundamental research	
Comments:	Phage associated. Active solely against hyaluronan with no activity against chondroitin 4-sulfate and chondroitin 6-sulfate	
Usage:	Agitate bottle sufficiently to fully homogenise enzyme precipitate before use	

Assay: One unit is defined as the amount of enzyme required to release 1 μmol of 4,5-unsaturated product per minute from 1 mg/mL hyaluronic acid in 50 mM sodium acetate buffer, pH 6.0, at 37°C, as measured at 232 nm

Primary sequence:

MSKEVASARIQHRGMTKQEWESSDILMEREIGIDMTTGYPKVGDKNKFKDLKDLRGPMGPQGPPSGERGLTGPI
GPRGPAGKPGTTDYNQLQNKPNLDAFAQKKEITNSKITKLESSKADKSAVYSKAESKIELDKKLSLTGGIVTGQLO
FKPNKSGIKPSSSVGGAINIDMSKSEGAGVVVYSNNDTSDGPLMSLRGTGKETFNKSALFVDYKGTNAVNIVMRQ
PTTPNFSSALNITSDNENGSAQMLRGSEKALGTLKITHENPNVEAKYDENATALSIDIVKKQKGGKGTAAQGIYI
NSTSGTTGKLLRIRNLSDDKFYVKSDDGGFYAKETSQIDGNLKLKDPPTANDHAATKAYVDKAISELKKLILKK

Literature: 1. Lindsay *et al.* (2009) *Microbiology-SGM* **155**, 443-449