

Name	Afe I												
Cat. #	E213												
Recognition site	AGC↑GCT TCG↓CGA												
Source	E.coli strain that carries the cloned Afe I gene from <i>Alcaligenes faecalis</i> T2774												
Assayed on	Lambda DNA (BamHI-digest)												
Unit definition	One unit of the enzyme is the amount required to hydrolyze 1 µg of Lambda DNA (BamHI-digest) in 1 hour at 37°C in a total reaction volume of 50 µl.												
Optimal SE-buffer	Y (33 mM Tris-acetate (pH 7.9 at 25°C); 10 mM magnesium acetate; 66 mM potassium acetate; 1 mM DTT.)												
Enzyme activity (%)	<table border="1"> <thead> <tr> <th>B</th> <th>G</th> <th>O</th> <th>W</th> <th>Y</th> <th>R</th> </tr> </thead> <tbody> <tr> <td>10 - 25</td> <td>25 - 50</td> <td>75 - 100</td> <td>75 - 100</td> <td>100</td> <td>100</td> </tr> </tbody> </table>	B	G	O	W	Y	R	10 - 25	25 - 50	75 - 100	75 - 100	100	100
B	G	O	W	Y	R								
10 - 25	25 - 50	75 - 100	75 - 100	100	100								
Optimal temperature	37°C												
Storage conditions	10 mM Tris-HCl (pH 7.6); 50 mM NaCl; 0.1 mM EDTA; 1 mM DTT; 200 µg/ml BSA; 50% glycerol; Store at -20°C.												
Ligations	After 10-fold overdigestion with enzyme more than 80% of DNA pBR322 fragments can be ligated and recut.												
Non-specific hydrolysis	No nonspecific activity was detected after incubation of 1 µg of DNA with 40 u.a. of enzyme for 16 hours at 37°C.												

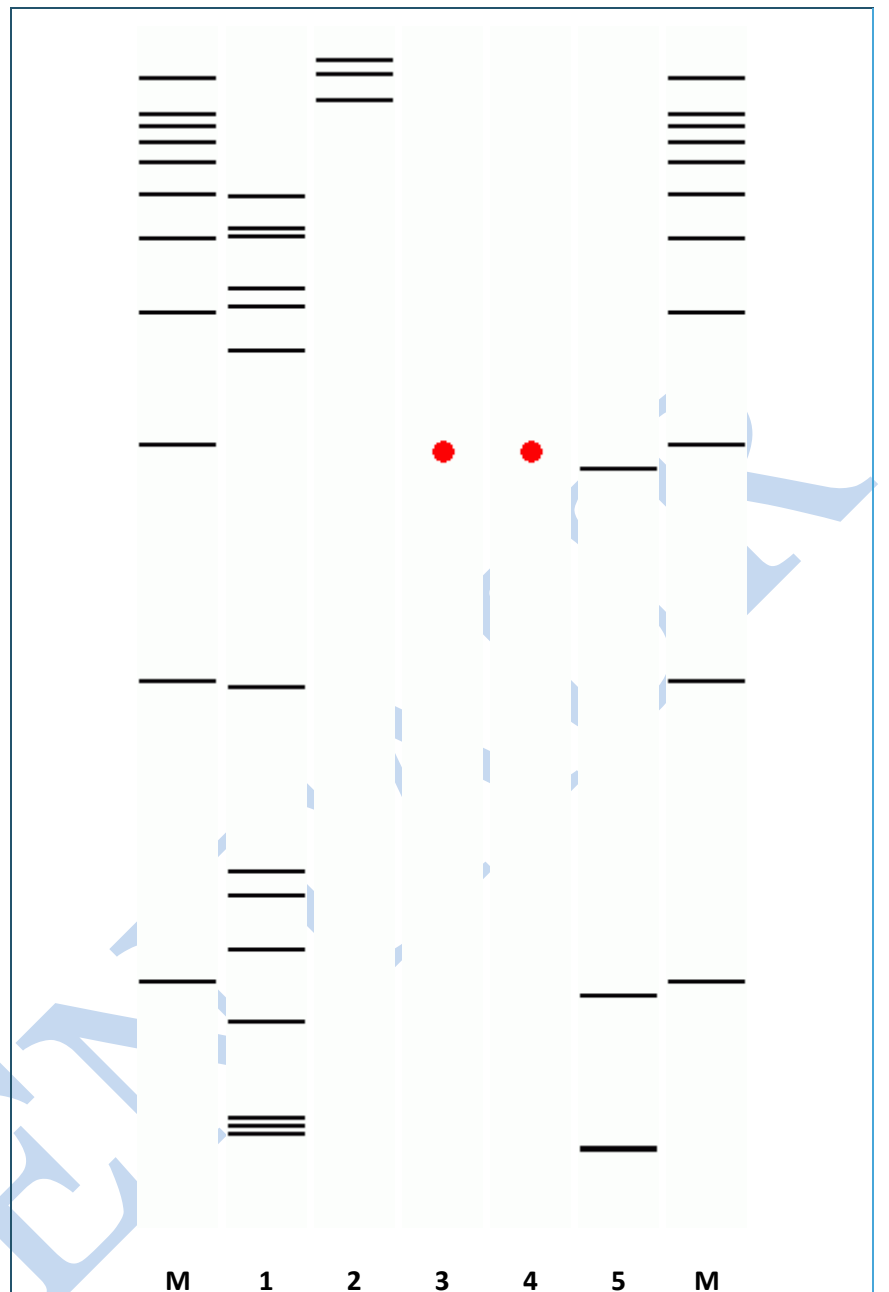
Reagents Supplied with Enzyme	10 X SE-buffer Y
Methylation sensitivity	not tested
Inactivation 20 minutes under	65°C
Notes	The minimum number of units that resulted in complete digestion of 1 µg of substrate DNA in 16 hours is 0,25. Afel cleaves supercoiled and linear plasmid DNA (pBR322) at a roughly equal rate. Afel cleaves Lambda DNA/BamHI digest at a rate 3-4 times higher than plasmid DNA.
References:	Abdurashitov, M.A., Kileva, E.V., Shevchenko, A.V., Degtyarev, S.Kh. Unpublished observations. (1994)

Theoretical diagrams of DNA digestion by this enzyme for the most known DNA substrates:

To view the fragments length values please point mouse cursor over diagram

Fragment lengths
15000, 10000,
9000, 8000, 7000,
6000, 5000, 4000,
3000, 2000, 1000

Ladder
[Close](#)



M - ladder, 1 - Adeno-2 DNA, 2 - Lambda DNA, 3 - T7 DNA, 4 - pUC19, 5 - pBR322