



Bacillus safensis strain RH12

Production: 9000 U/ml

Purification: pure SAPRH (37000 U/mg)

□ Biochemical characterization of the purified SAPRH

- SAPRH is a monomer de 28 kDa
- It showed optimal activity at pH 9 and 60°C
- Irreversible inhibition of enzyme activity by DFP and PMSF confirmed its belonging to the serine proteases family.
- *sapRH* gene (1,3 kb): was cloned, sequenced, and expressed in the extracellular fraction of *E. coli* strain BL21(DE3)pLysS and *Pichia pastoris*

□ Performance evaluation of the purified protease

- The overproduction of *sapRH*, its **thermostable** nature, and **compatibility** with detergents are features which suggest its application as **a bio-additive in detergent formulations**