



The amino-acid sequence of PIL-2-2A- $\alpha$ -factor-FBC : MYKMQLLCCIALTLALMANGAPTSSSTKNT KKQLEPLLLDLQLLLKEVKNYENADLSRMLTFKFYMPKQATELKHLQCLVEELKALEGVVLNLGQSNSDSANIKES MNINVTVLELGSETSFCKCEYDDETVAVFLNKWITFCQSIYSTLTGSGEGRGSLLTCGVEENPGPMRFPSIFT AVLFAASSALAAPVNNTTEDETAQIPAEAVIGYSLEGDFDVAVLPFSNSTNGLLFINTTIAISIAAKEEGVSLEKREA EARLARIVVIRVARGSGDDDKVQRWLIVWRKRGSGDDDKILPWKWPWWPWRRGGSGDDDKILAWKWA WWWAWRRGGSGDDDKHHHHHH

supplementary materials:

**Figure S1.** The flow diagram of recombinant plasmid pGAPZ $\alpha$ A-PIL2-FBC construction (A), electrophoretic analysis of *Pichia pastoris* recombinants (1% agarose gel) (B) and RT-PCR of *Pichia pastoris* recombinants (1% agarose gel)(C). (Ba) Lane M: 20bp DNA ladder marker; Lane 1: Electrophoresis of the PCR fragment of pGAPZ $\alpha$ A-FBC. Lane 2: PCR product of pGAPZ $\alpha$ A plasmid. (Bb) Lane M: 20bp DNA ladder marker; Lane 1: Electrophoretic identification of double digested pGAPZ $\alpha$ A-FBC/EcoRI+XbaI. Lane 2: pGAPZ $\alpha$ A plasmid. (Bc) Lane M: Trans 2K plus DNA ladder marker; Lane 1: Electrophoresis of the PCR fragment of pGAPZ $\alpha$ A- PIL-2/FBC. Lane 2: PCR product of pGAPZ $\alpha$ A plasmid. (Bd) Lane M: Trans 2K plus DNA ladder marker; Lane 1: Electrophoretic identification of double digested pGAPZ $\alpha$ A- PIL-2/FBC /EcoRI+XbaI. Lane 2: pGAPZ $\alpha$ A plasmid. (Ca) Lane M: 20bp DNA ladder marker; Lane 1: Electrophoresis of the RT-PCR fragment of SMD-pGAPZ $\alpha$ A-B (FBC). Lane 2: RT-PCR fragment of SMD-pGAPZ $\alpha$ A. (Cb) Lane M: Trans 2K plus DNA ladder marker; Lane 1: Electrophoresis of the RT-PCR fragment of SMD-pGAPZ $\alpha$ A-IL2-B (PIL-2/FBC). Lane 2: RT-PCR fragment of SMD-pGAPZ $\alpha$ A.