

**Supplement to:** Majida Atta Muhammad, Samia Falak, Naeem Rashid, Qurra-tul-Ann Afza Gardner, Nasir Ahmad, Tadayuki Imanaka, and Muhammad Akhtar, *Escherichia coli* Signal Peptidase Recognizes and Cleaves Archaeal Signal Sequence (ISSN 0006-2979, *Biochemistry (Moscow)*, 2017, Vol. 82, No. 7, pp. 821-825)

**Table S1.** ESI mass spectrometric analysis of Tk1884 purified from extracellular medium

Derivative of Tk1884	Experimental $M_r$ , Da	Theoretical $M_r$ , Da
Full length Tk1884 as shown in Fig. S1	not seen	52213.57
Mature protein after cleavage between Ala26 and Ala27	49456.60	49459.12
Mature protein after cleavage between Ala21 and Gln22	49910.36	49913.61

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      10          20          30          40          50          60
MKKFVALLIT MFFVVSMAAV AQPASAAKYS ELEEGGVIMQ AFYWDVPAGG IWWDTIRSKI
      70          80          90          100         110         120
PEWYEAGISA IWIPPASKGM GGAYSMGYDP YDFFDLGEYN QKGTVETRFG SKQELINMIN
      130         140         150         160         170         180
TAHAYGIKVI ADIVINHRAG GDLEWNPFGV DYTWTDFSKV ASGKYTANYL DFHPNEVKCC
      190         200         210         220         230         240
DEGTFGGFPD IAHEKEWDQH WLWASDESYA AYLRSIGVDA WRFDYVKGYG AWVVKDWLW
      250         260         270         280         290         300
WGGWAVGEYW DTNVDALLNW AYSSGAKVFD FPLYKMDDEA FDNTNIPALV DALQNGGTVV
      310         320         330         340         350         360
SRDPFKAVTF VANHDTDIW NKYPAYAFIL TYEQPVIFY RDIYEWLNKD KLNNLIWIHD
      370         380         390         400         410         420
HLAGGSTSIV YYDSDELIFV RRGDSKRPGL ITYINLGSSK VGRWVYVPKF AGACIHEYTG
      430         440         450         460
NLGGWVDKYV ESSGWVYLEA PAYDPASGQY GYTVWSYCGV G

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**Fig. S1.** Amino acid sequence of Tk1884. The underlined sequence shows the signal peptide cleaved by *E. coli* signal peptidase. Amino acid residues determined by N-terminal sequencing are shown in red.

## Protein sequence report

Created on 28-Feb-17

Alta Bioscience code: S6912

Customer sample code: TK1884-SL

### N terminus

Residue			
1	A		
2	K		
3	Y		
4	S		
5	E		
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

Comments:- Good clear signal.

Notes on the presentation of the data:-

? = most probable assignment.

- = nothing detected at this position.

X = unknown component

Where several sequences are observed, an attempt is made to arrange them in descending order of abundance at each residue. However because of difficulties inherent in the sequencing process, this should be treated as a guide only.

Reported by



Date 28/02/17

File name: S6912 N Rashid.doc

Template: Proseq15, version 5. last modified 24<sup>th</sup> August 2015

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Fig. S2. Protein sequence report.