Supplementary Material

Bio-reduction of Chromate with periplasmic reductase by a novel isolated strain *Pseudoalteromonas* sp. CF10-13

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Table and figure captions:

Table. S1 Cr(Ⅵ) reduction by different resting cells in Cr(Ⅵ) solution. (Cells grown in absence or presence of 10 mg/L Cr(Ⅵ))

Table. S2 Peak numbers and relative content (RC) of the surface functional groups determined by XPS.

Fig. S1 Consecutive changes of pH value with time (Cells grown with 50 mg/L Cr(Ⅵ).

Fig. S2 A magnified map of FTIR spectra of *P.* sp. CF10-13 cultured without or with 50 mg/L Cr(Ⅵ).

Fig. S3 XPS spectra of *P.* sp. CF10-13 cultured with 50 mg/L Cr(Ⅵ) for 24 h (a) and 52 h (b) with *P.* sp. CF10-13 cultured in optimum condition.

Table. S1 Cr(Ⅵ) reduction by different resting cells in Cr(Ⅵ) solution.

RE (%)	In Cr(Ⅵ) solution	
	25 mg/L	50 mg/L
control	0	0
Grown in absence of Cr(Ⅵ)	0.61	0
Grown in presence of Cr(Ⅵ) (10 mg/L)	44.90	31.20

Inductivity of the Cr(Ⅵ) reductase was identified by pre-cultivating the bacteria in absence or presence of 10mg/L Cr(Ⅵ). As showed (Table. S1), 44.90 % and 31.20 % Cr(Ⅵ) were reduced by resting cells pre-cultivated with Cr(Ⅵ). While no Cr(Ⅵ) was reduced with resting cells pre-cultivated in Cr(Ⅵ)-free media. These data suggested that Cr(Ⅵ) reductase produced by *P.* sp. CF10-13 was a kind of inducible enzyme.

Table. S2 Peak numbers and relative content (RC) of the surface functional groups determined by XPS.

Samples	b (24h)		c (52h)	
	BE (eV)	RC (%)	BE (eV)	RC (%)
Peak1	284.60	66.11	284.80	61.14
Peak2	285.90	23.49	286.20	25.49
Peak3	287.80	10.40	287.80	13.37

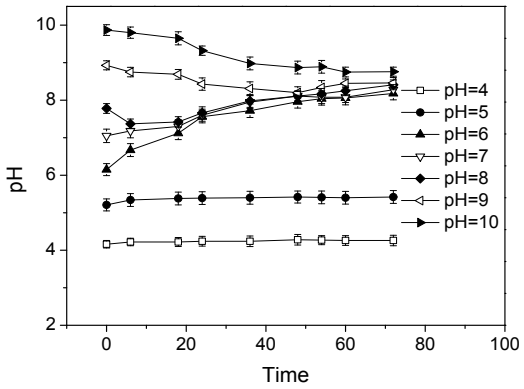

Fig. S1

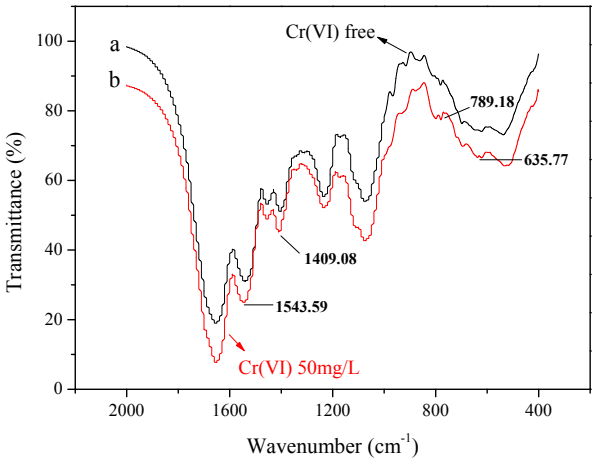

Fig. S2 A magnified map of FTIR spectra of *P.* sp. CF10-13 cultured without or with 50 mg/L Cr(Ⅵ).

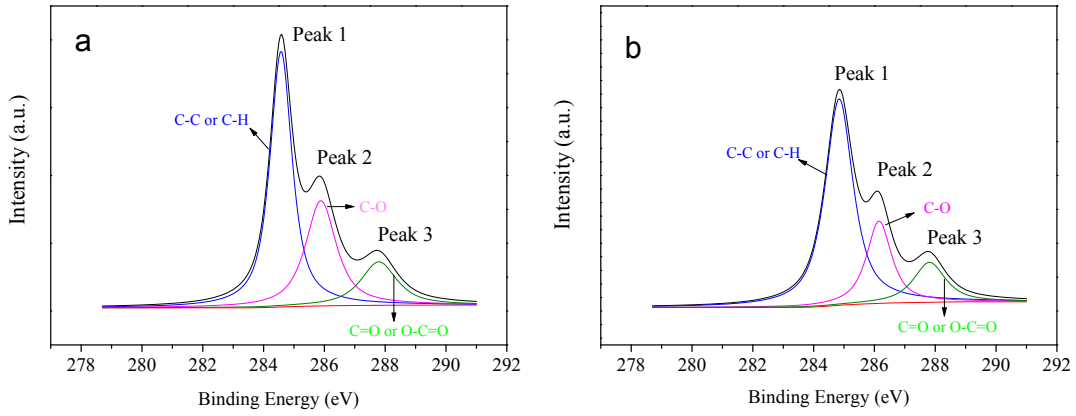

Fig. S3 XPS spectra of *P.* sp. CF10-13 cultured with 50 mg/L Cr(Ⅵ) for 24 h (a) and 52 h (b) with *P.* sp. CF10-13 cultured in optimum condition.