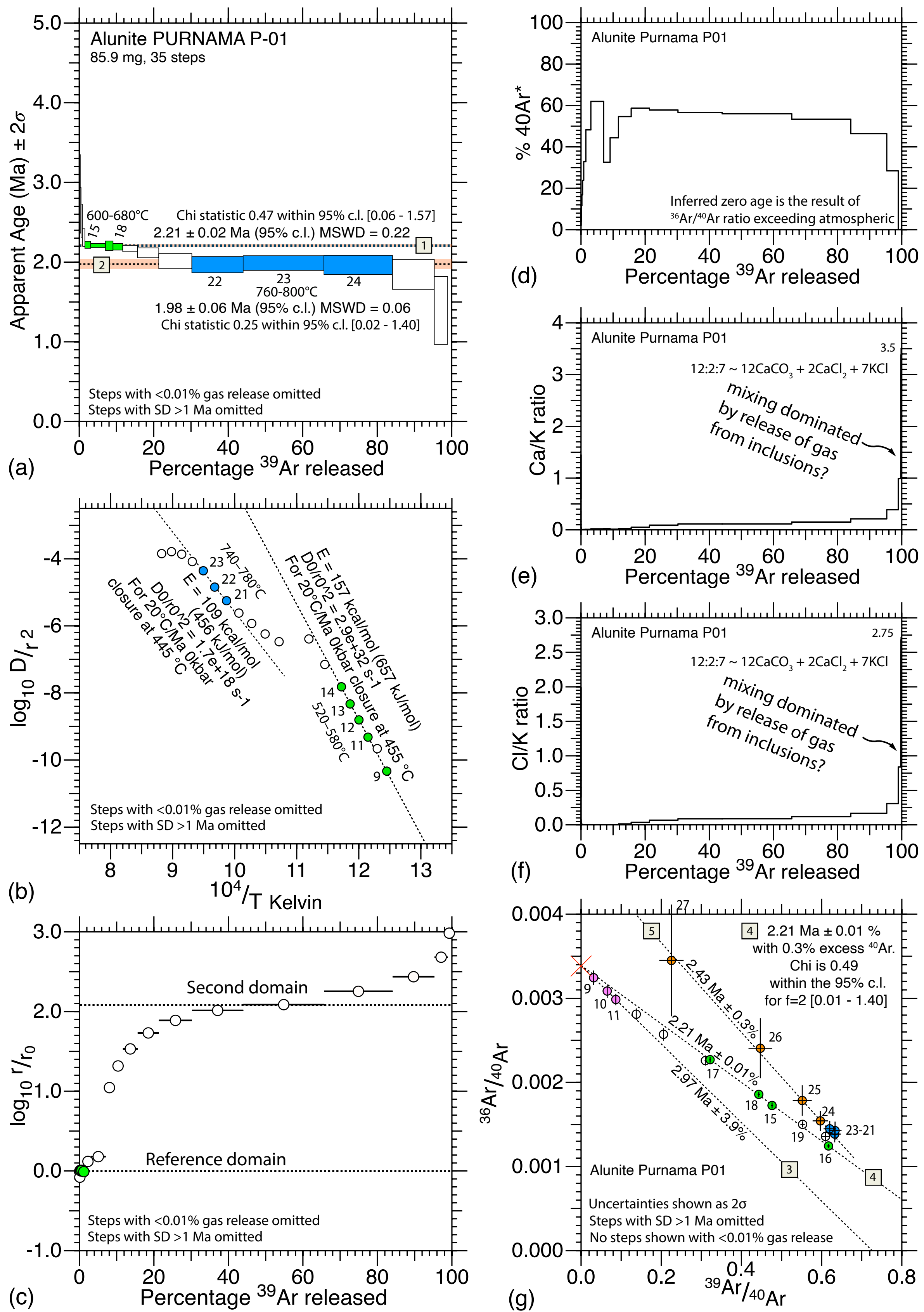
Alunite PURNAMA P-01
85.9 mg, 35 steps
600-680°C
Chi statistic 0.47 within 95% c.l. [0.06 - 1.57]
2.21 ± 0.02 Ma (95% c.l.) MSWD = 0.22
760-800°C
1.98 ± 0.06 Ma (95% c.l.) MSWD = 0.06
Chi statistic 0.25 within 95% c.l. [0.02 - 1.40]
Steps with <0.01% gas release omitted
Steps with SD >1 Ma omitted
Apparent Age (Ma) ± 2σ
Percentage 39Ar released
(a)
Alunite Purnama P01
% 40Ar*
Inferred zero age is the result of
36Ar/40Ar ratio exceeding atmospheric
(d)
Alunite Purnama P01
12:2:7 ~ 12CaCO3 + 2CaCl2 + 7KCl
mixing dominated by release of gas from inclusions?
Ca/K ratio
(e)
740–780°C
E = 109 kcal/mol (456 kJ/mol)
D0/r0^2 = 1.7e+18 s-1
For 20°C/Ma 0kbar closure at 445 °C
E = 157 kcal/mol (657 kJ/mol)
D0/r0^2 = 2.9e+32 s-1
For 20°C/Ma 0kbar closure at 455 °C
520–580°C
log10 D/r2
10^4/T Kelvin
(b)
Second domain
Reference domain
log10 r/r0
(c)
Alunite Purnama P01
12:2:7 ~ 12CaCO3 + 2CaCl2 + 7KCl
mixing dominated by release of gas from inclusions?
Cl/K ratio
(f)
2.21 Ma ± 0.01 %
with 0.3% excess 40Ar.
Chi is 0.49
within the 95% c.l.
for f=2 [0.01 - 1.40]
2.43 Ma ± 0.3%
2.21 Ma ± 0.01%
2.97 Ma ± 3.9%
Alunite Purnama P01
Uncertainties shown as 2σ
Steps with SD >1 Ma omitted
No steps shown with <0.01% gas release
36Ar/40Ar
39Ar/40Ar
(g)