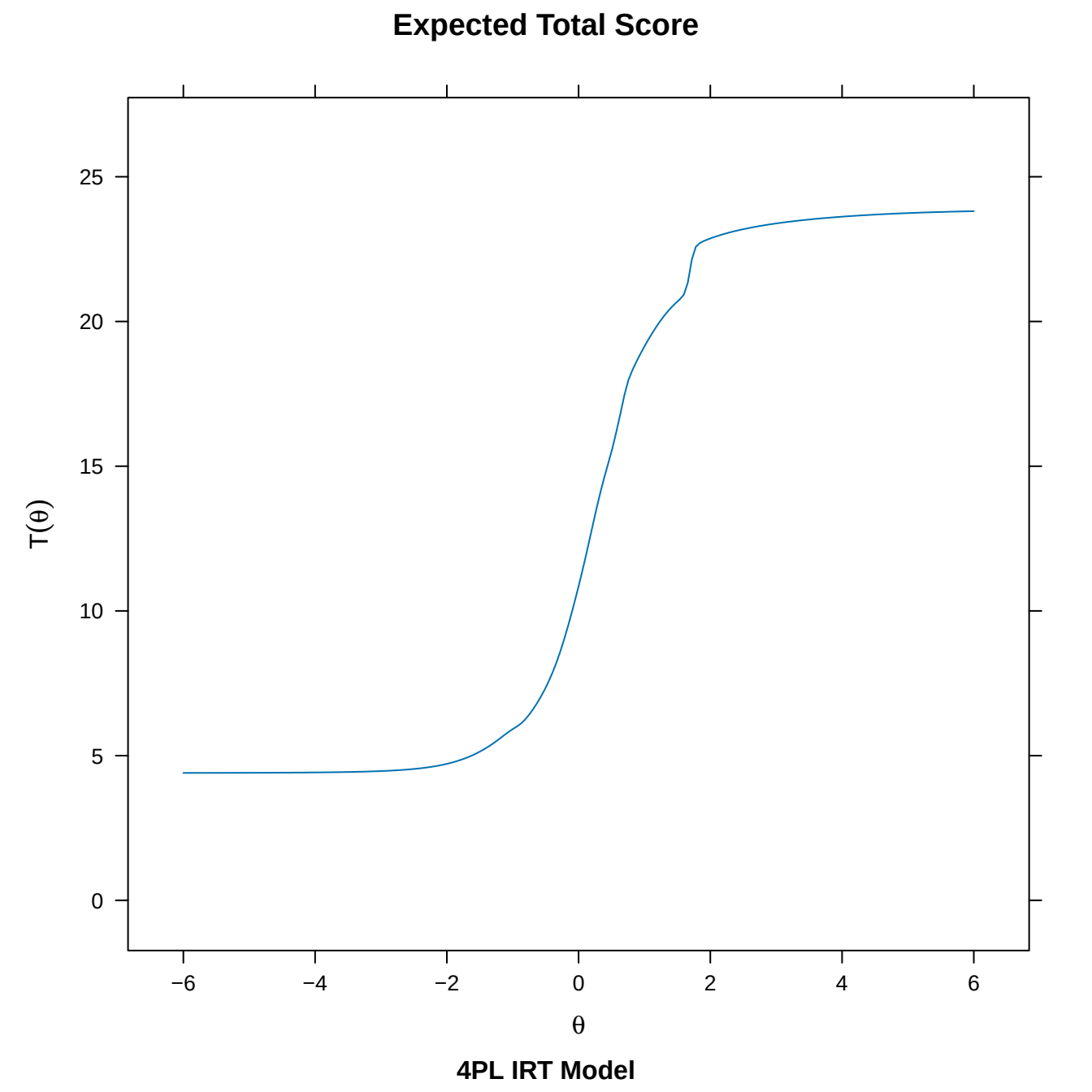
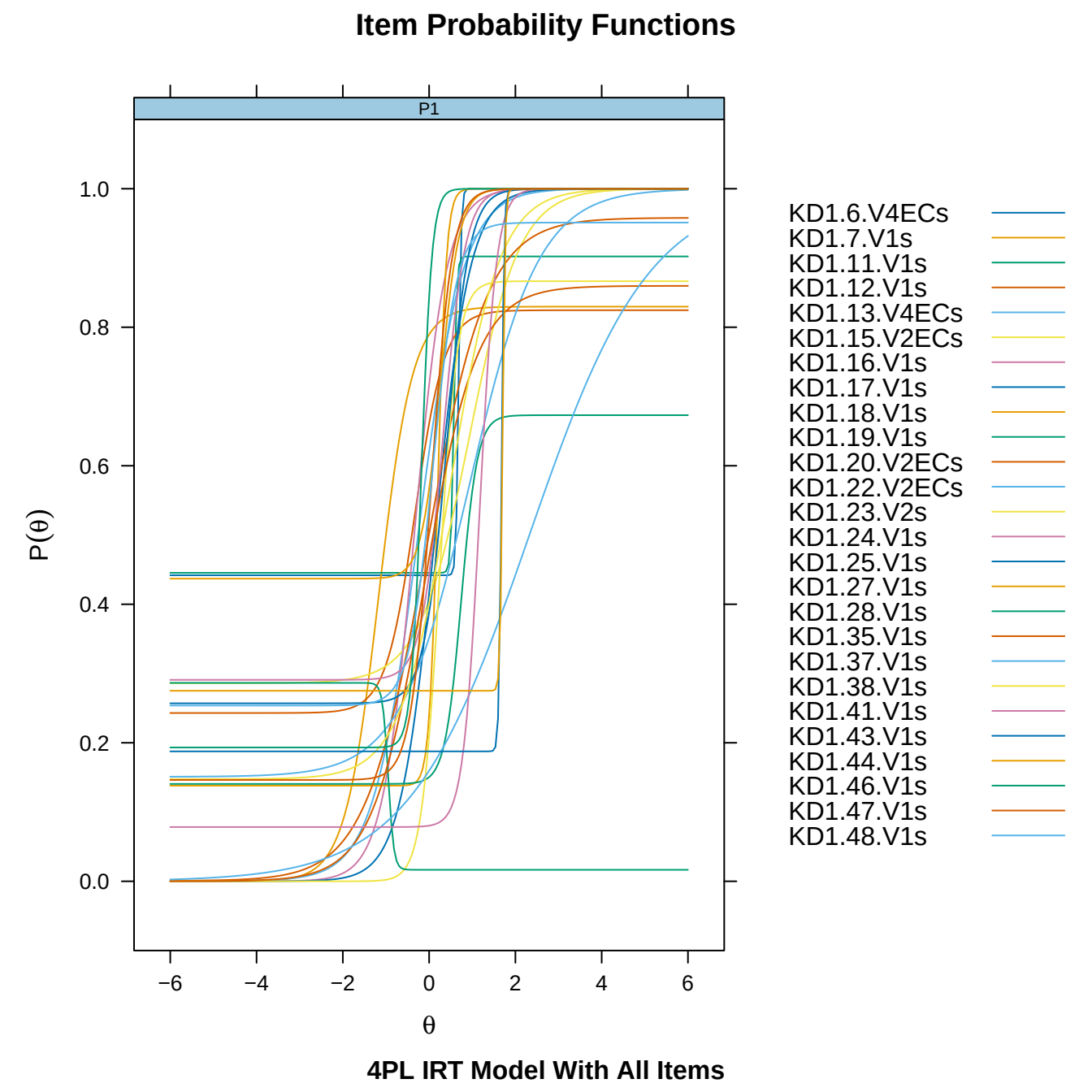
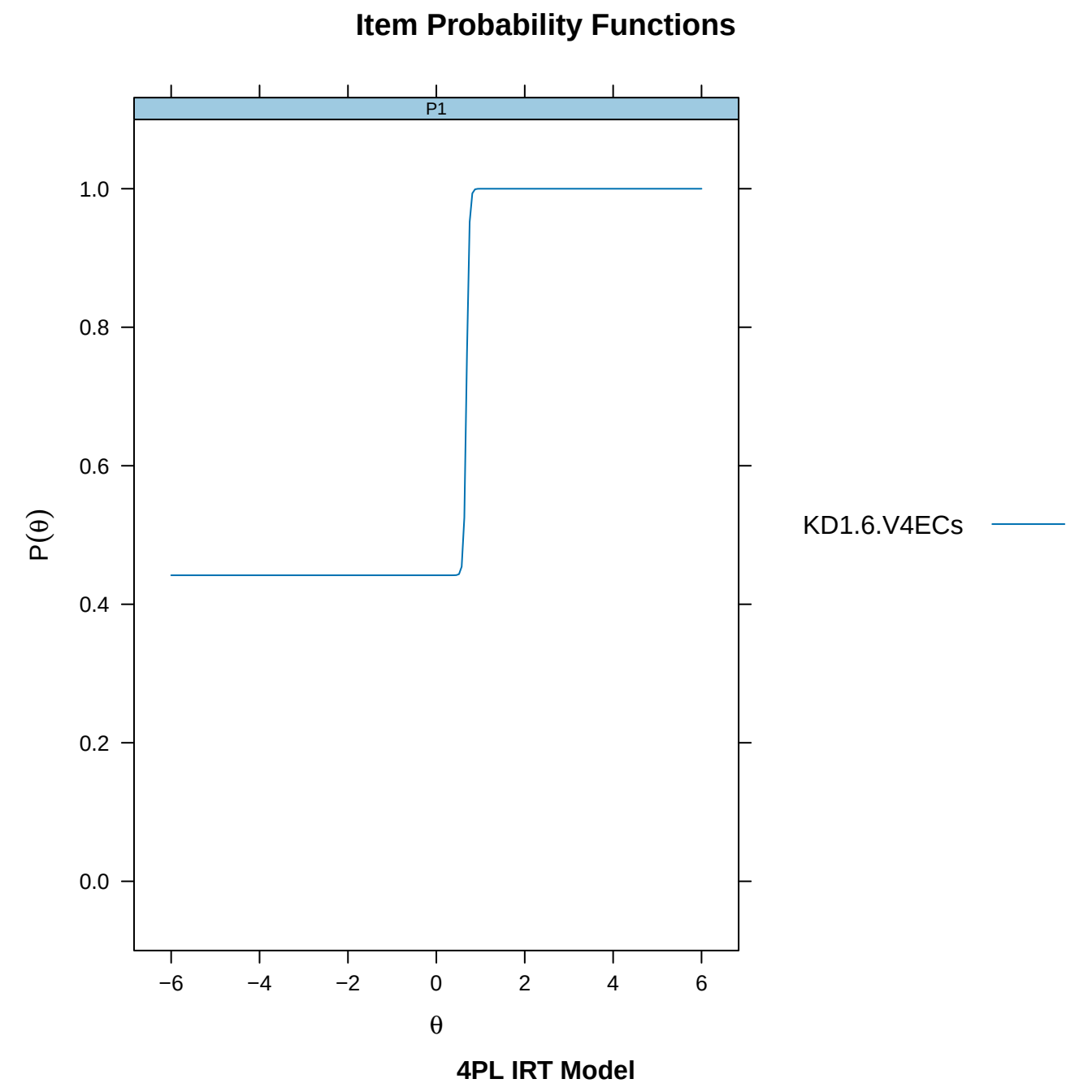
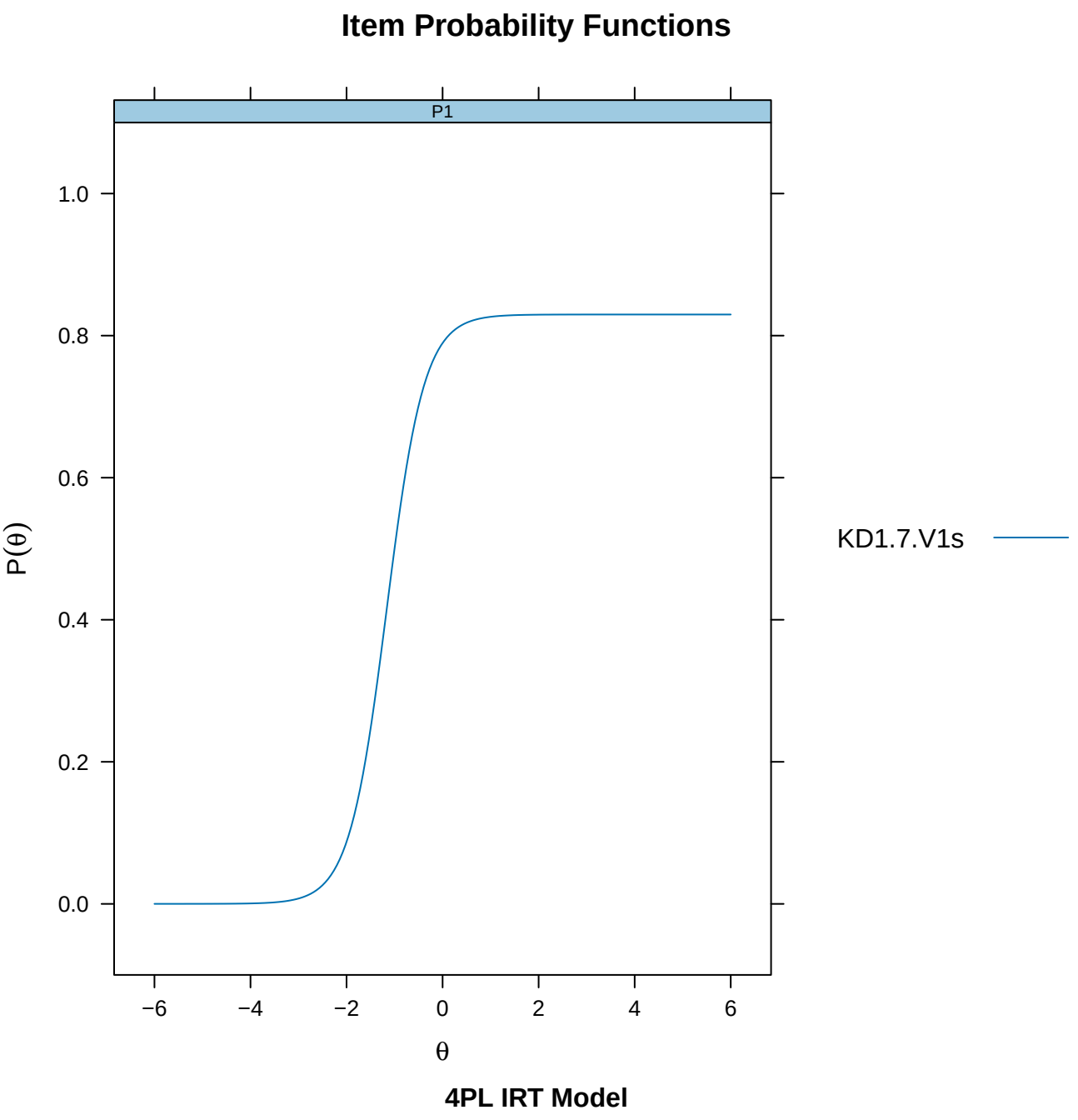
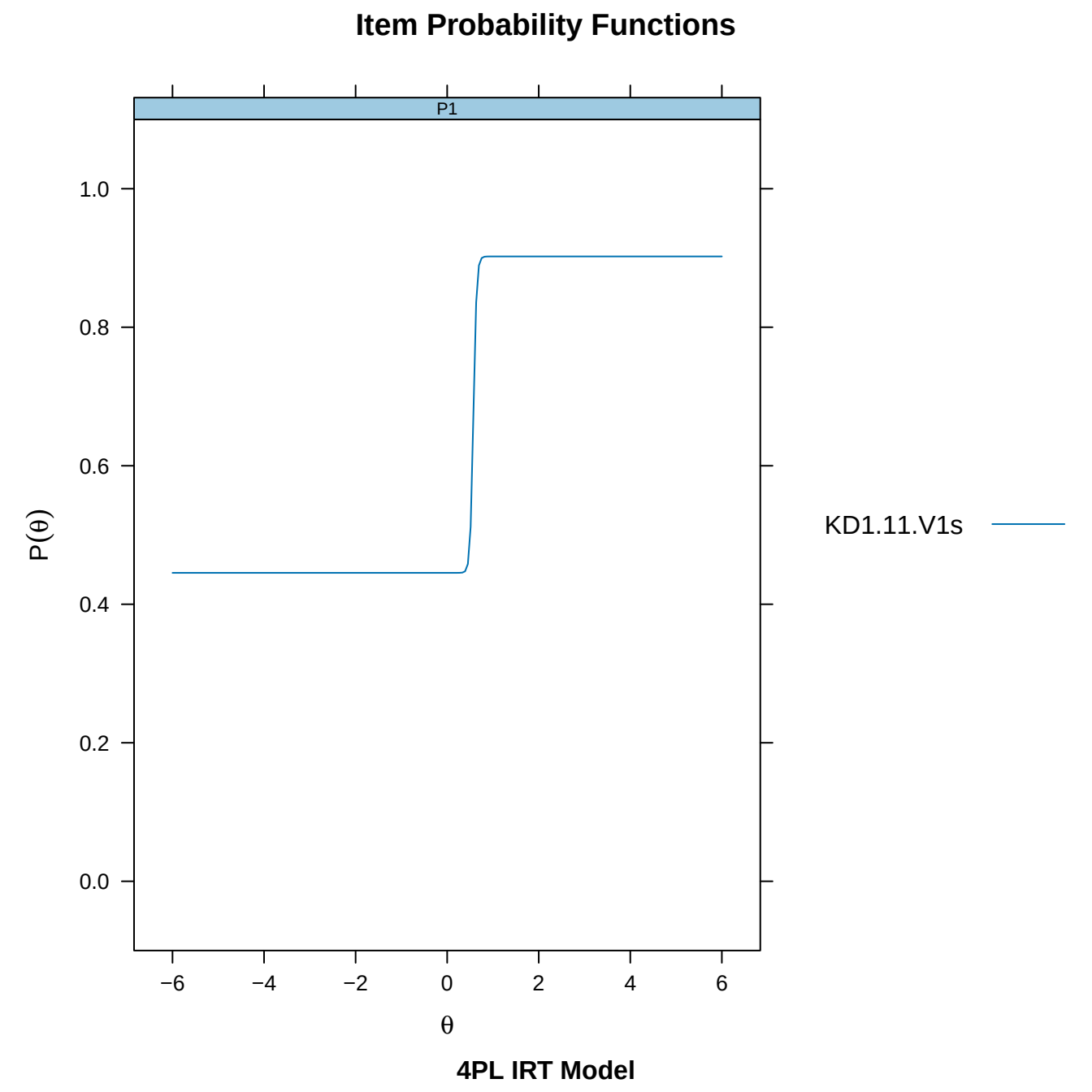
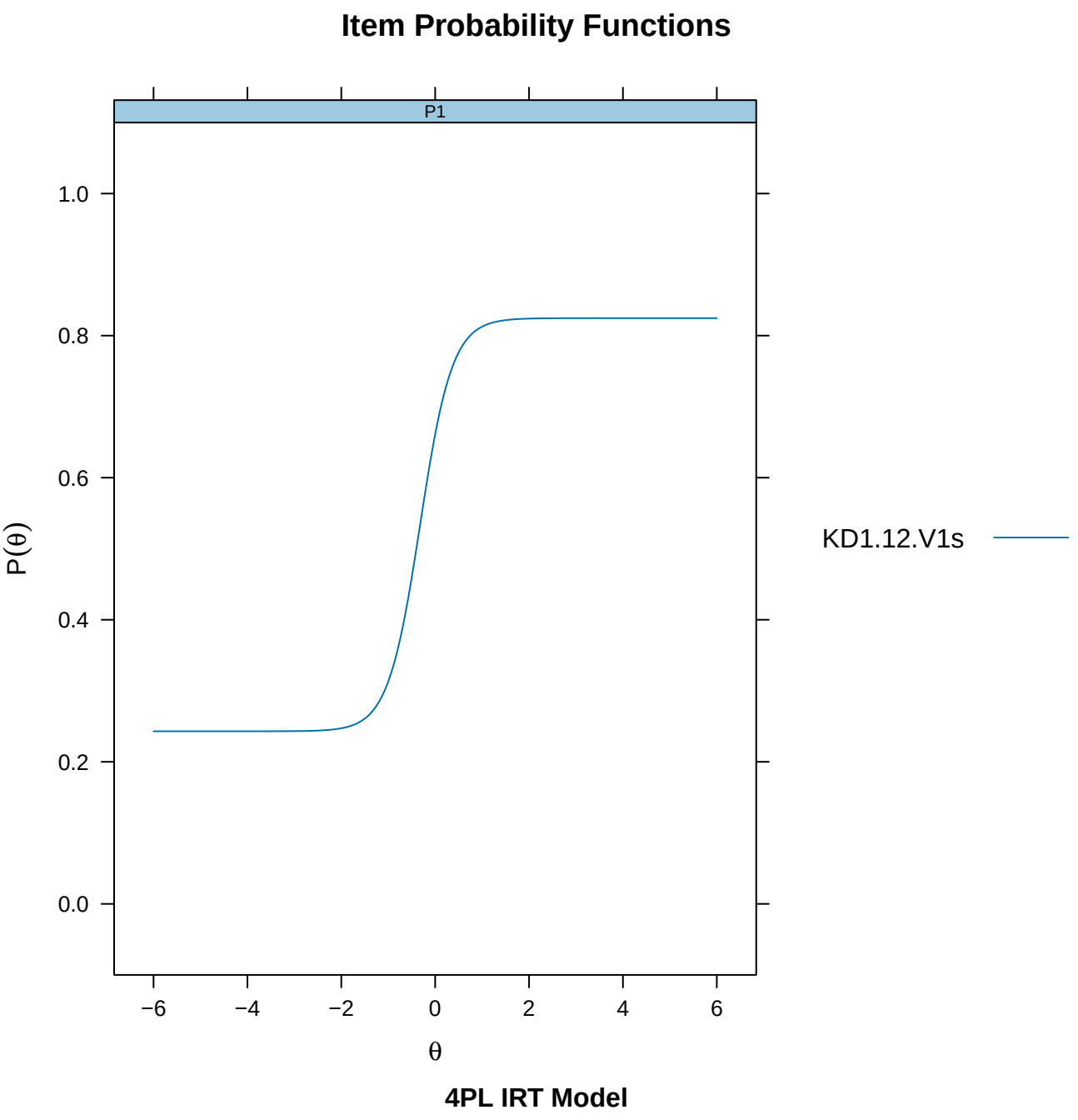

Expected Total Score
25
20
15
10
5
0
T(θ)
−6
−4
−2
0
2
4
6
θ
4PL IRT Model

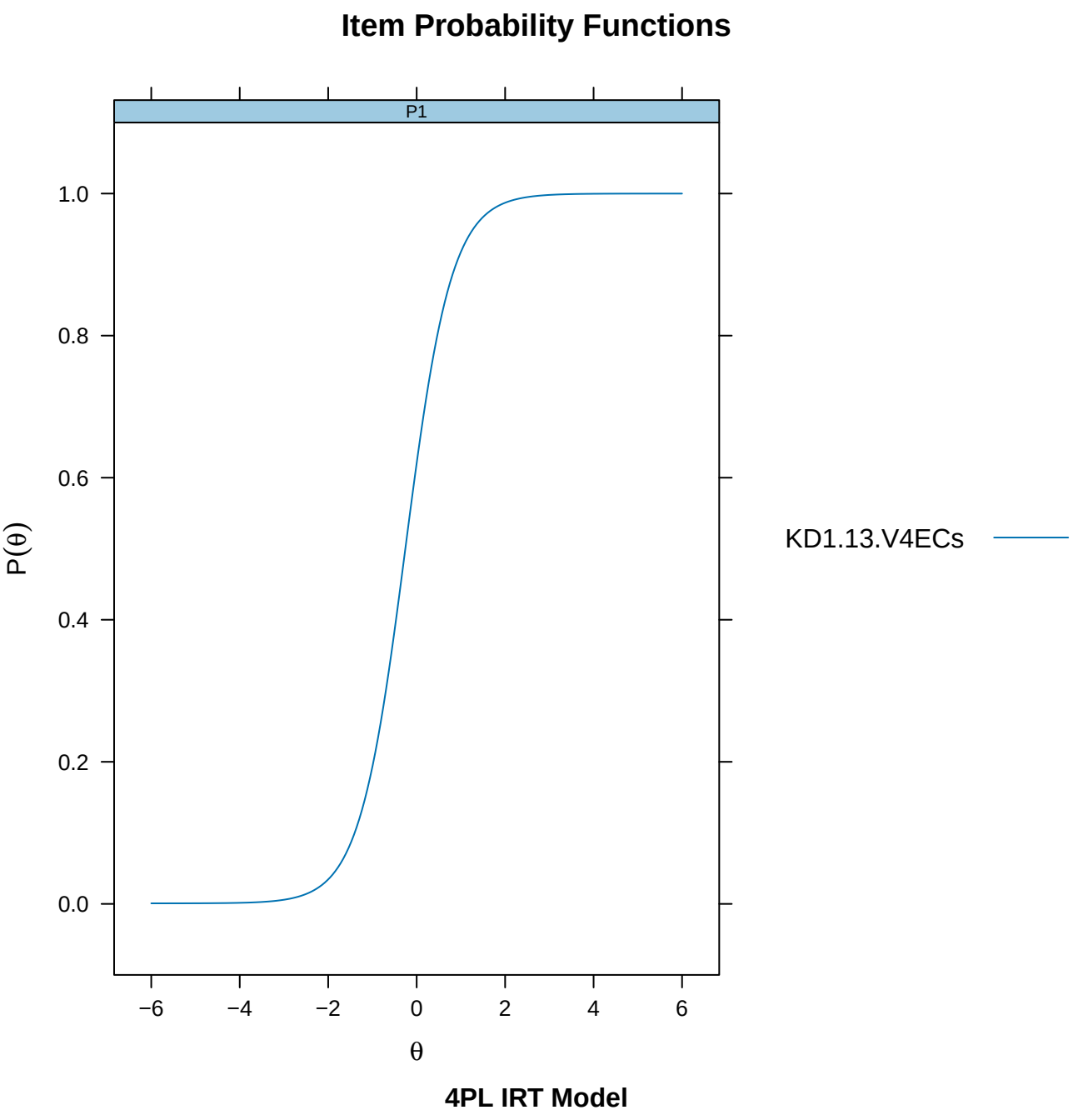

Item Probability Functions
P1
1.0
0.8
0.6
0.4
0.2
0.0
P(θ)
−6
−4
−2
0
2
4
6
θ
KD1.6.V4ECs
KD1.7.V1s
KD1.11.V1s
KD1.12.V1s
KD1.13.V4ECs
KD1.15.V2ECs
KD1.16.V1s
KD1.17.V1s
KD1.18.V1s
KD1.19.V1s
KD1.20.V2ECs
KD1.22.V2ECs
KD1.23.V2s
KD1.24.V1s
KD1.25.V1s
KD1.27.V1s
KD1.28.V1s
KD1.35.V1s
KD1.37.V1s
KD1.38.V1s
KD1.41.V1s
KD1.43.V1s
KD1.44.V1s
KD1.46.V1s
KD1.47.V1s
KD1.48.V1s
4PL IRT Model With All Items

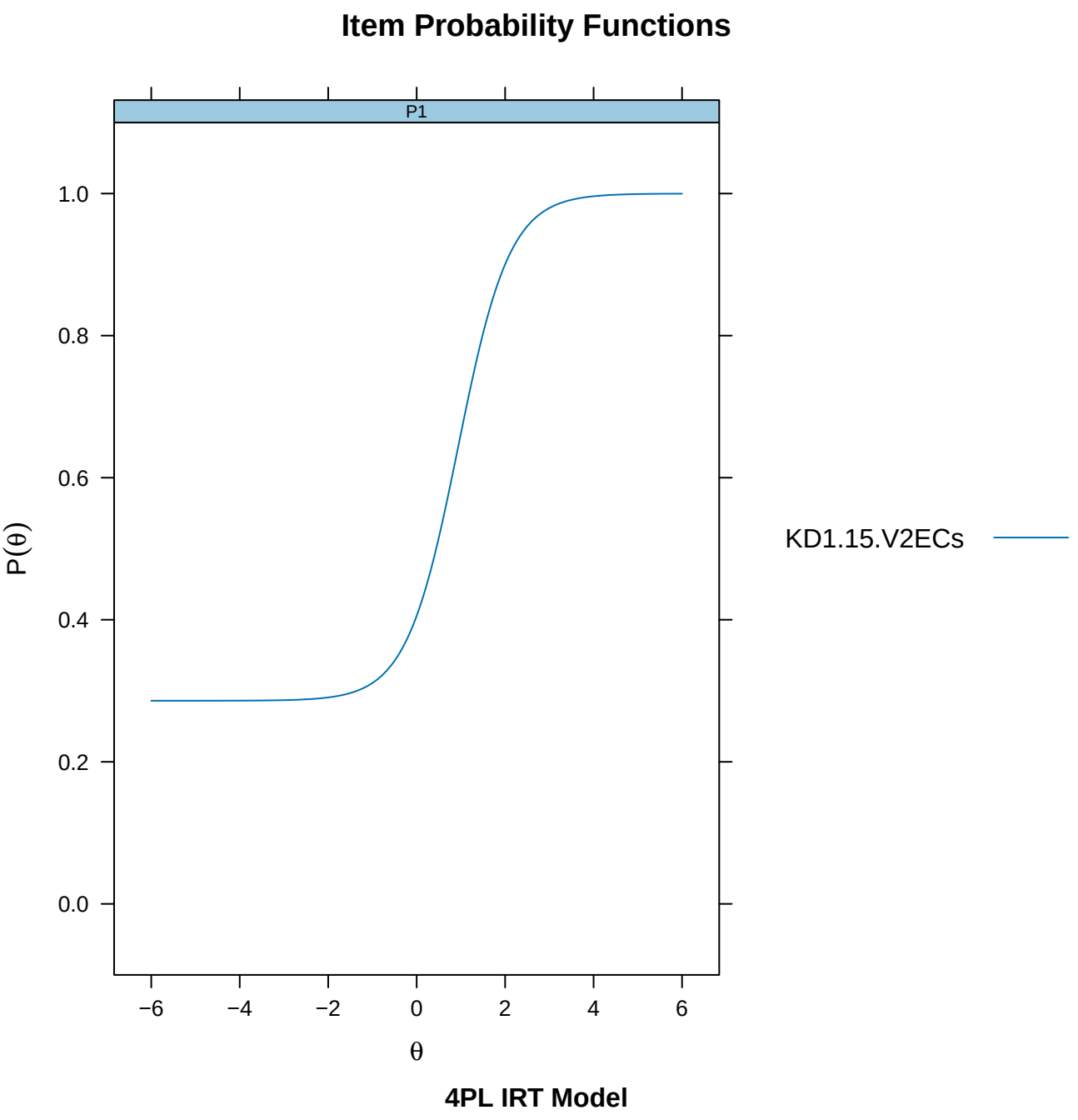

Item Probability Functions
P1
1.0
0.8
0.6
0.4
0.2
0.0
P(θ)
−6
−4
−2
0
2
4
6
θ
KD1.6.V4ECs
4PL IRT Model

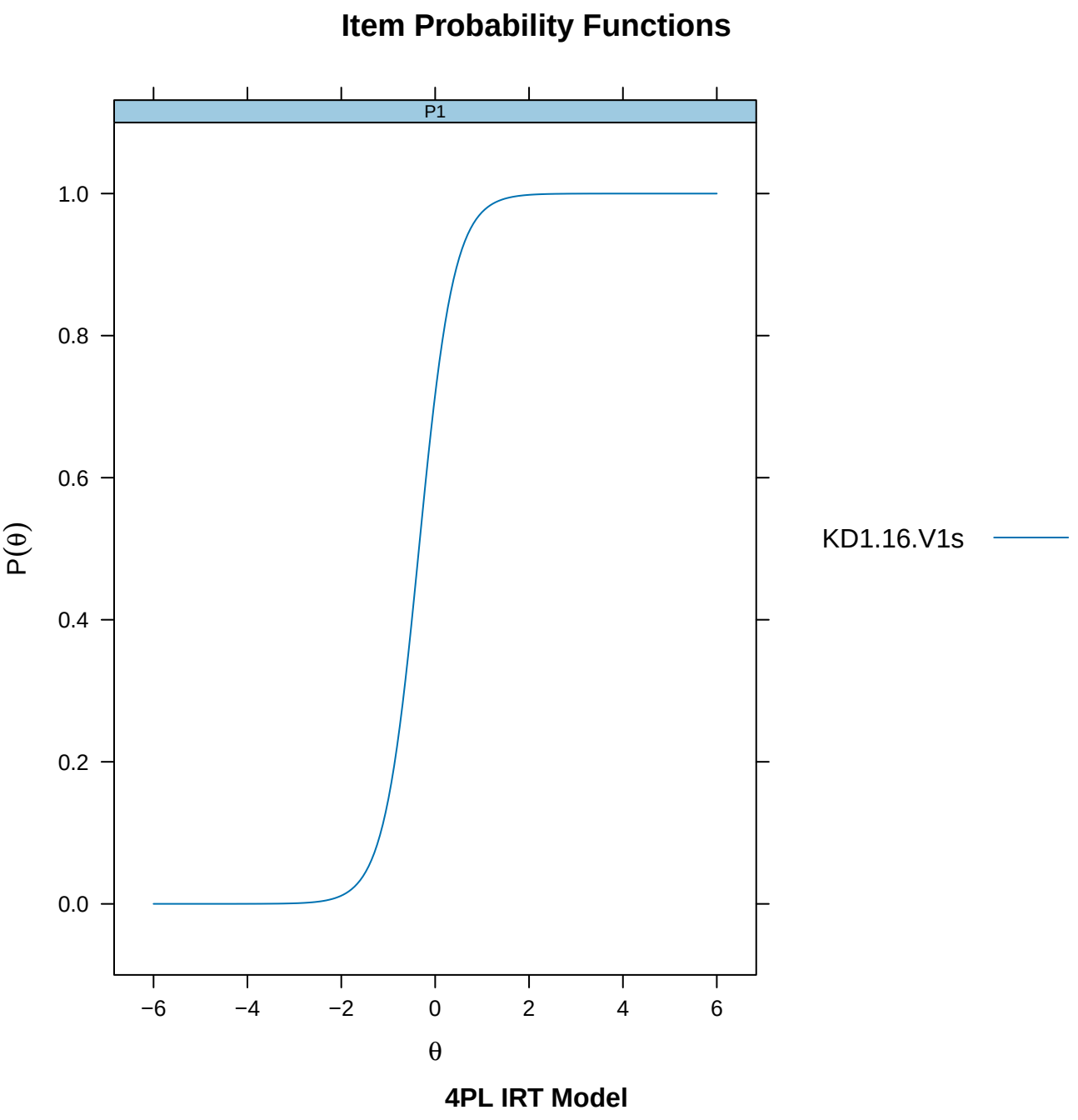

Item Probability Functions
P1
1.0
0.8
0.6
0.4
0.2
0.0
P(θ)
−6
−4
−2
0
2
4
6
θ
KD1.7.V1s
4PL IRT Model

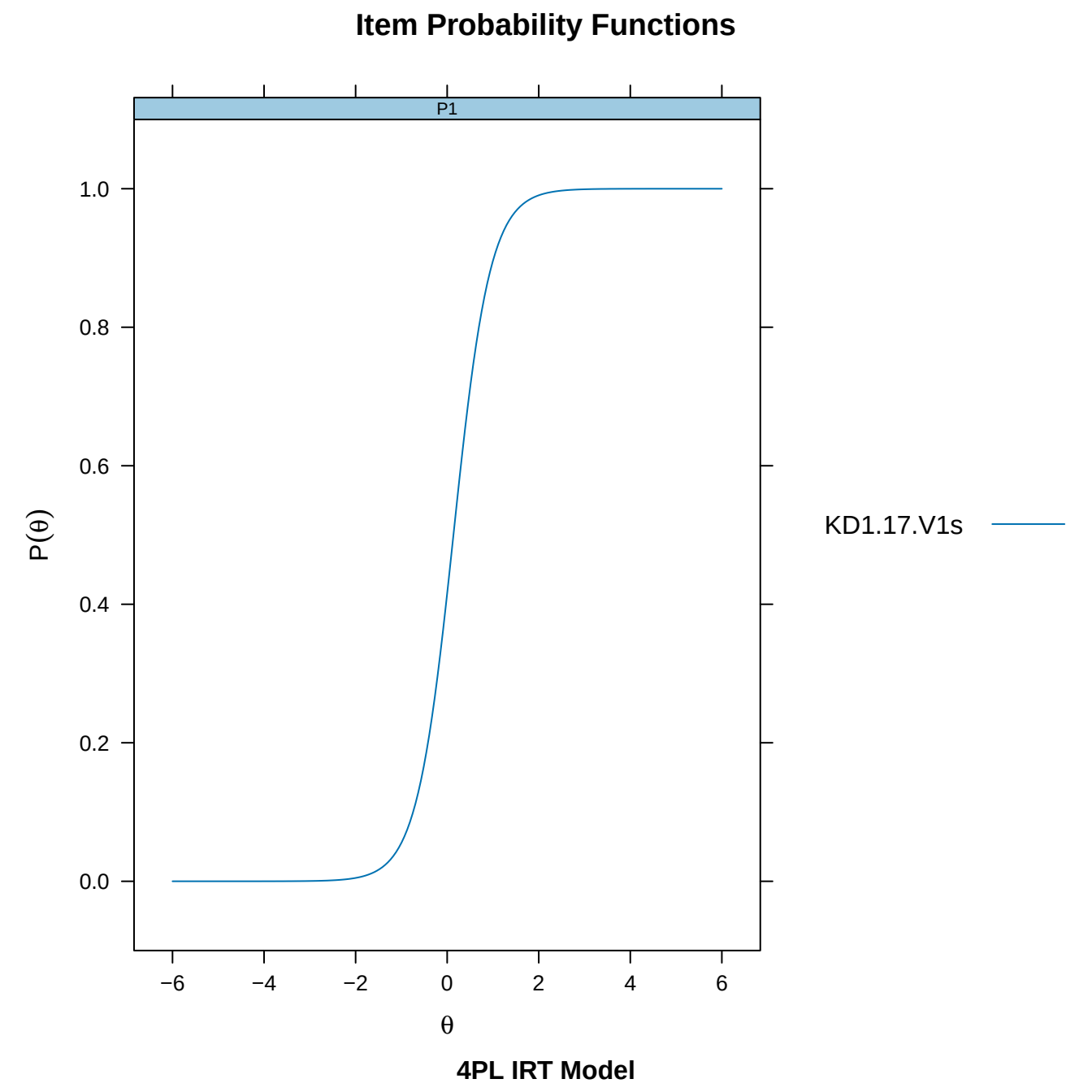

Item Probability Functions
P1
1.0
0.8
0.6
0.4
0.2
0.0
P(θ)
−6
−4
−2
0
2
4
6
θ
KD1.11.V1s
4PL IRT Model

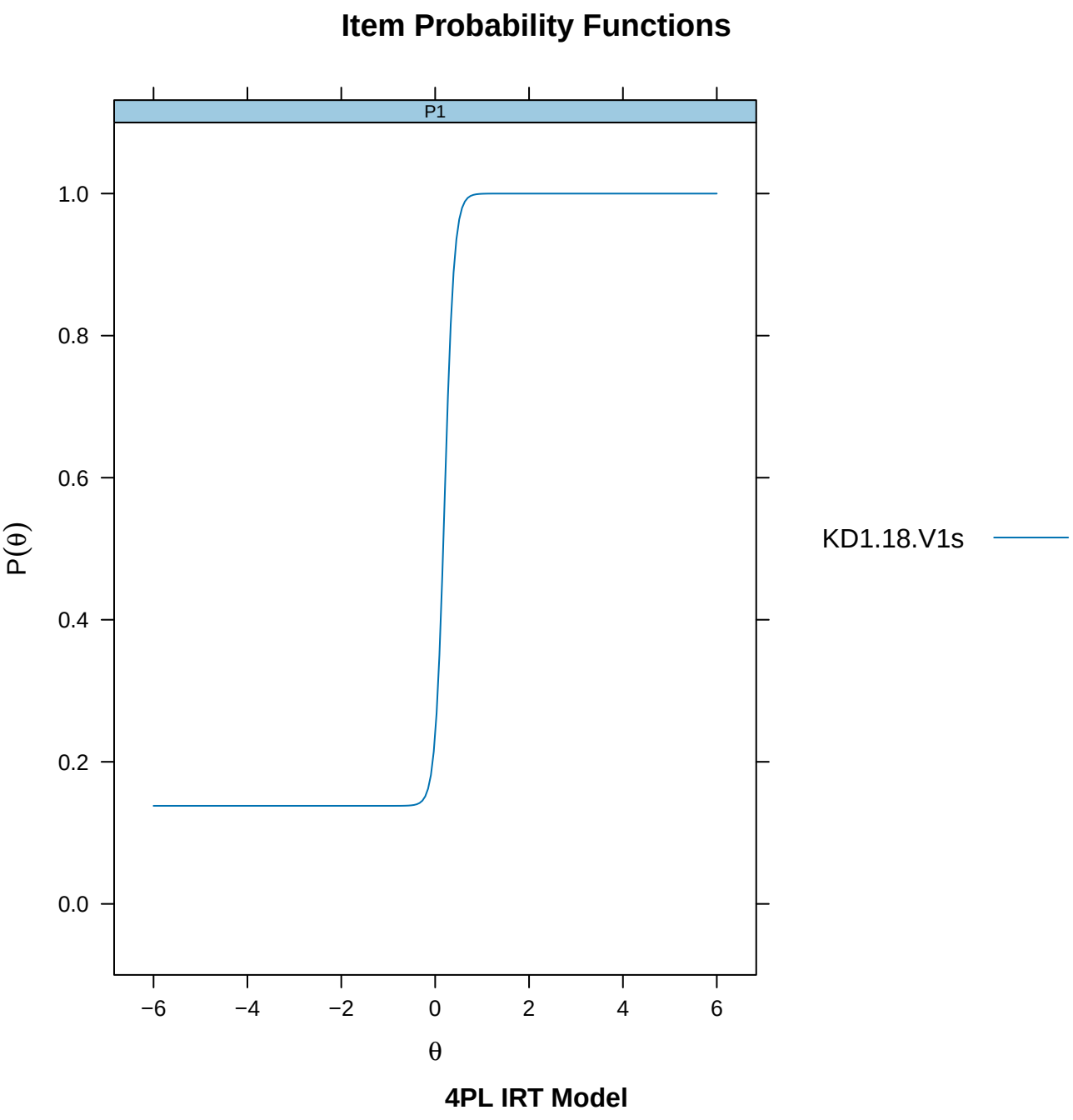

Item Probability Functions
P1
1.0
0.8
0.6
0.4
0.2
0.0
P(θ)
−6
−4
−2
0
2
4
6
θ
KD1.12.V1s
4PL IRT Model

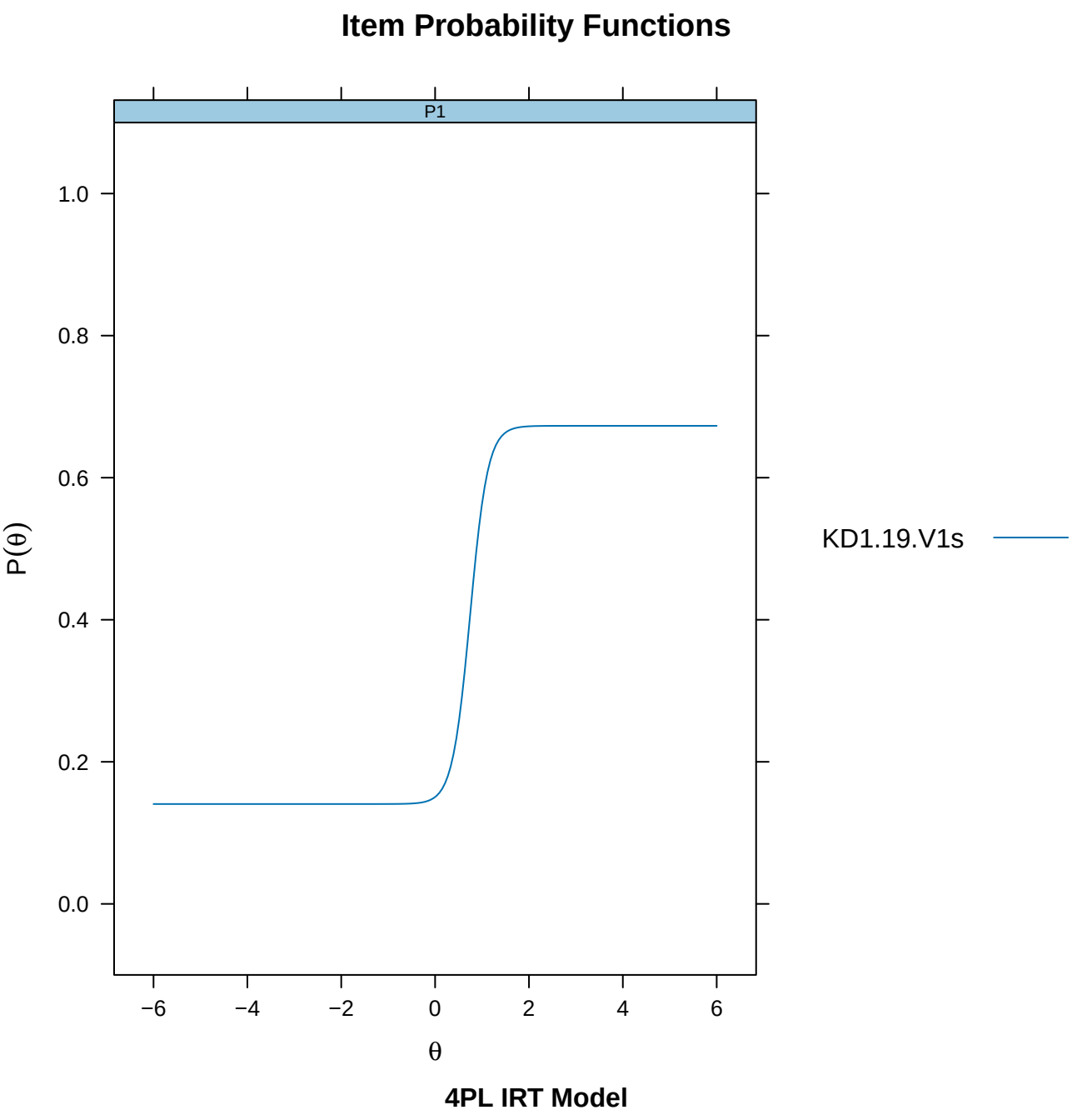

Item Probability Functions
P1
1.0
0.8
0.6
0.4
0.2
0.0
P(θ)
−6
−4
−2
0
2
4
6
θ
KD1.13.V4ECs
4PL IRT Model

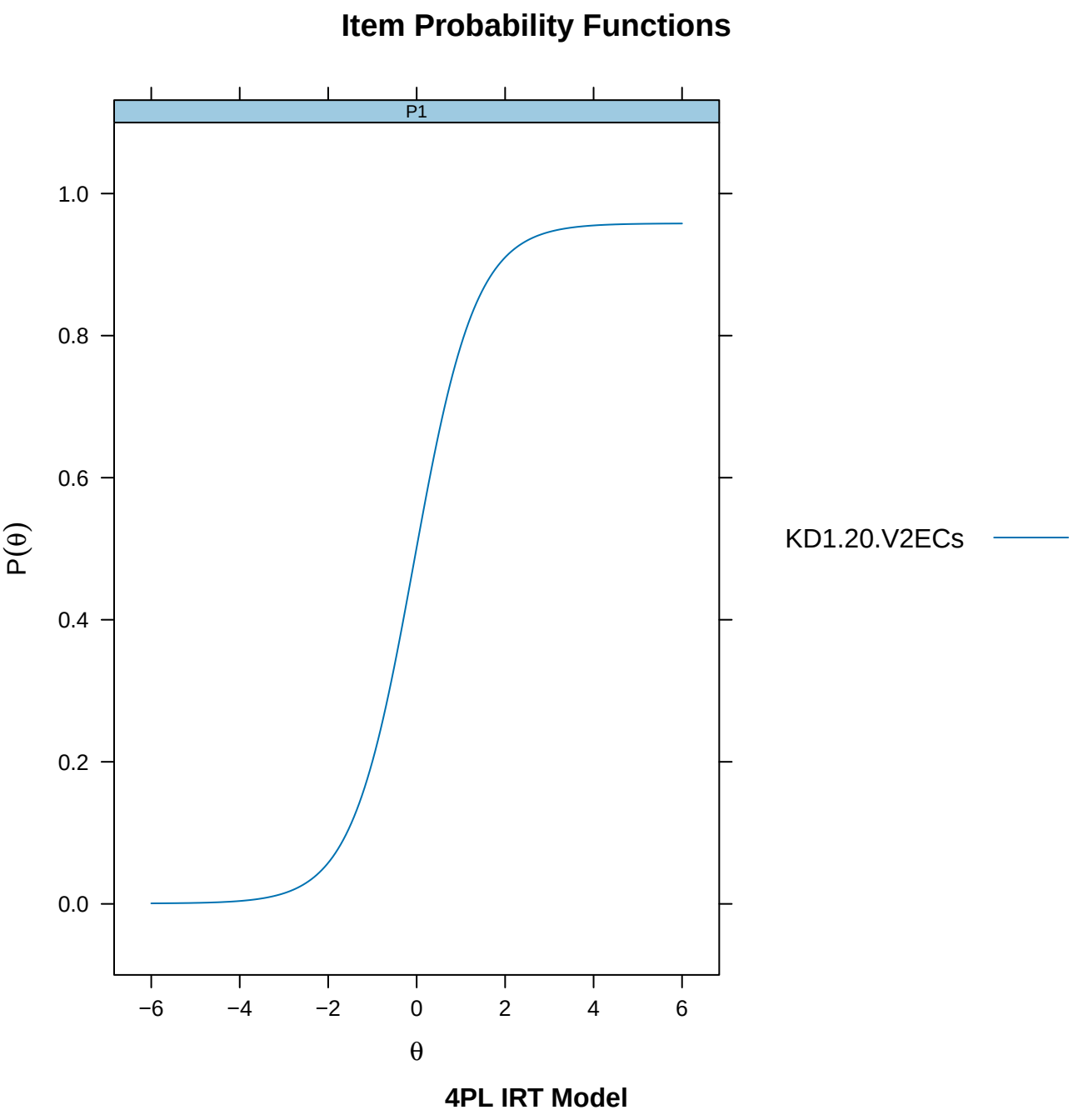

Item Probability Functions
P1
1.0
0.8
0.6
0.4
0.2
0.0
P(θ)
−6
−4
−2
0
2
4
6
θ
KD1.15.V2ECs
4PL IRT Model

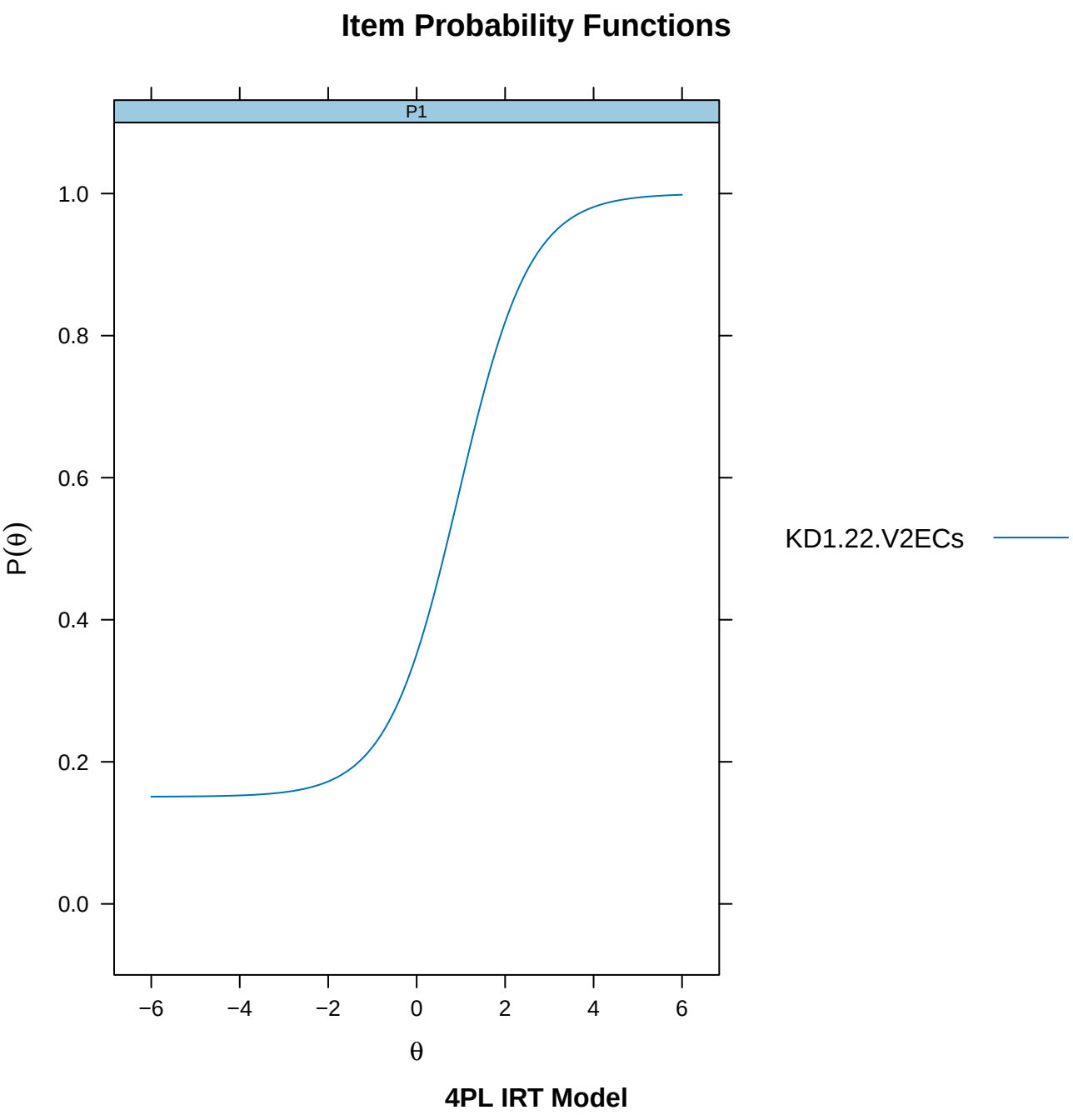

Item Probability Functions
P1
1.0
0.8
0.6
0.4
0.2
0.0
P(θ)
−6
−4
−2
0
2
4
6
θ
KD1.16.V1s
4PL IRT Model

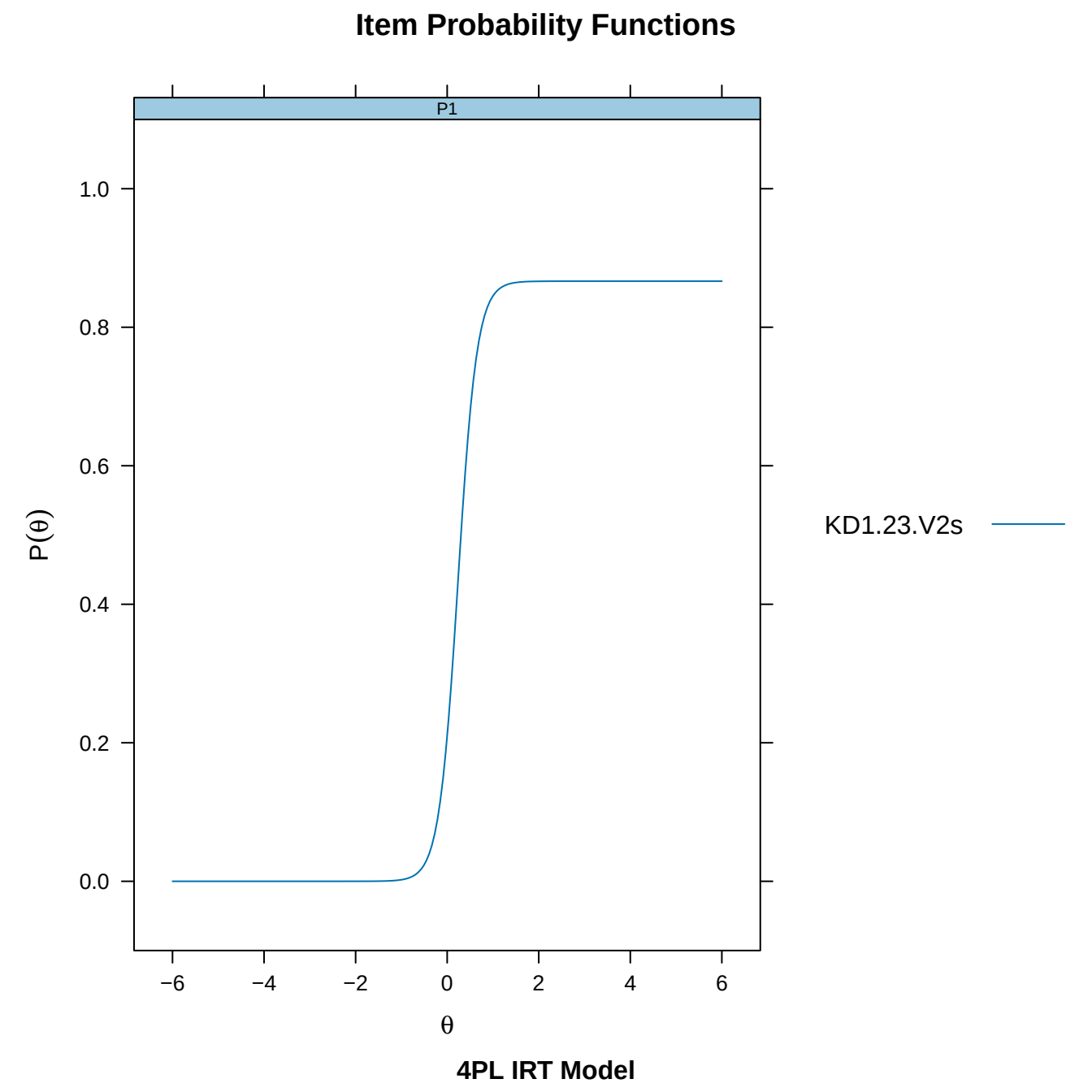

Item Probability Functions
P1
1.0
0.8
0.6
0.4
0.2
0.0
P(θ)
−6
−4
−2
0
2
4
6
θ
KD1.17.V1s
4PL IRT Model

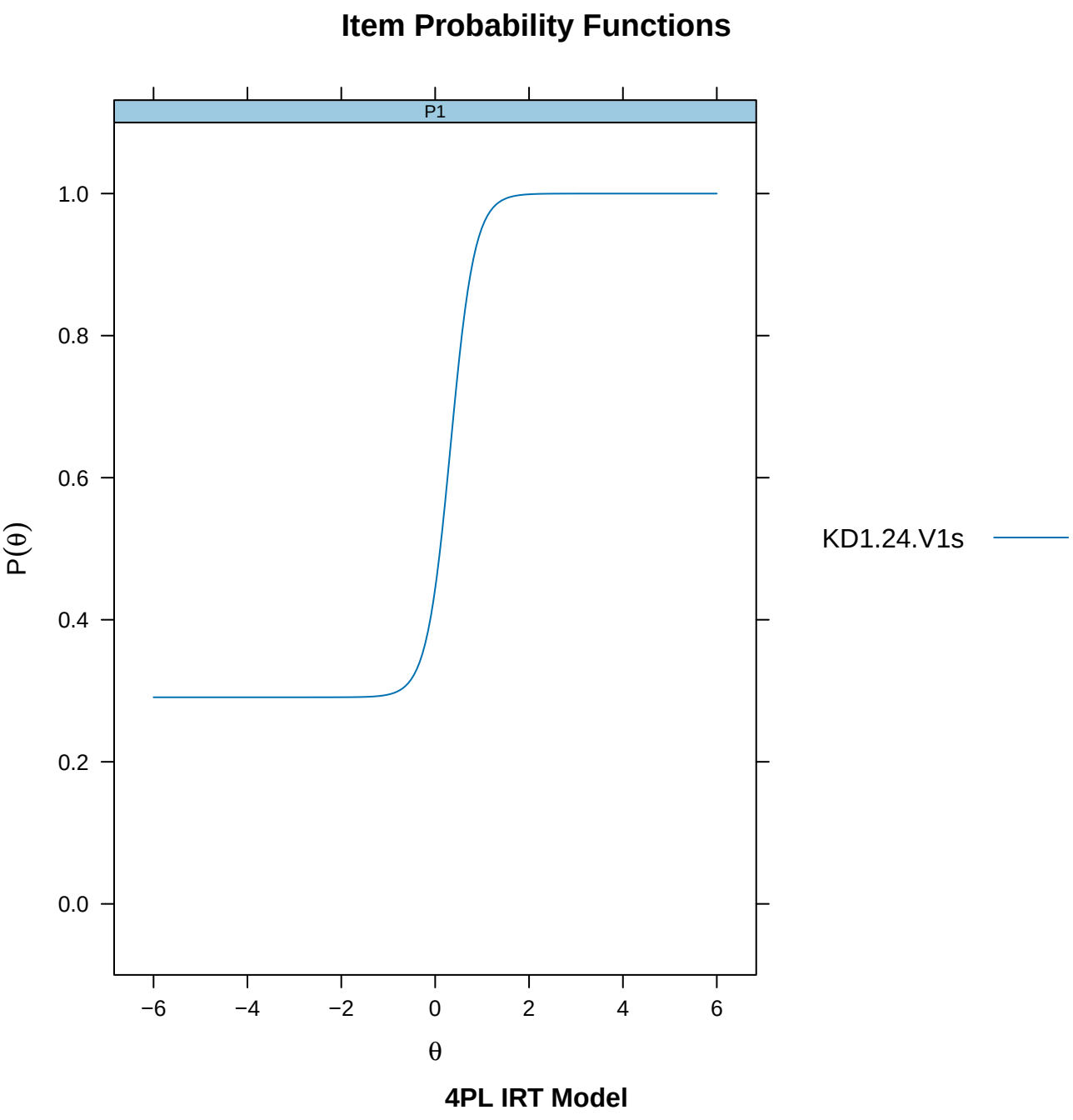

Item Probability Functions
P1
1.0
0.8
0.6
0.4
0.2
0.0
P(θ)
−6
−4
−2
0
2
4
6
θ
KD1.18.V1s
4PL IRT Model

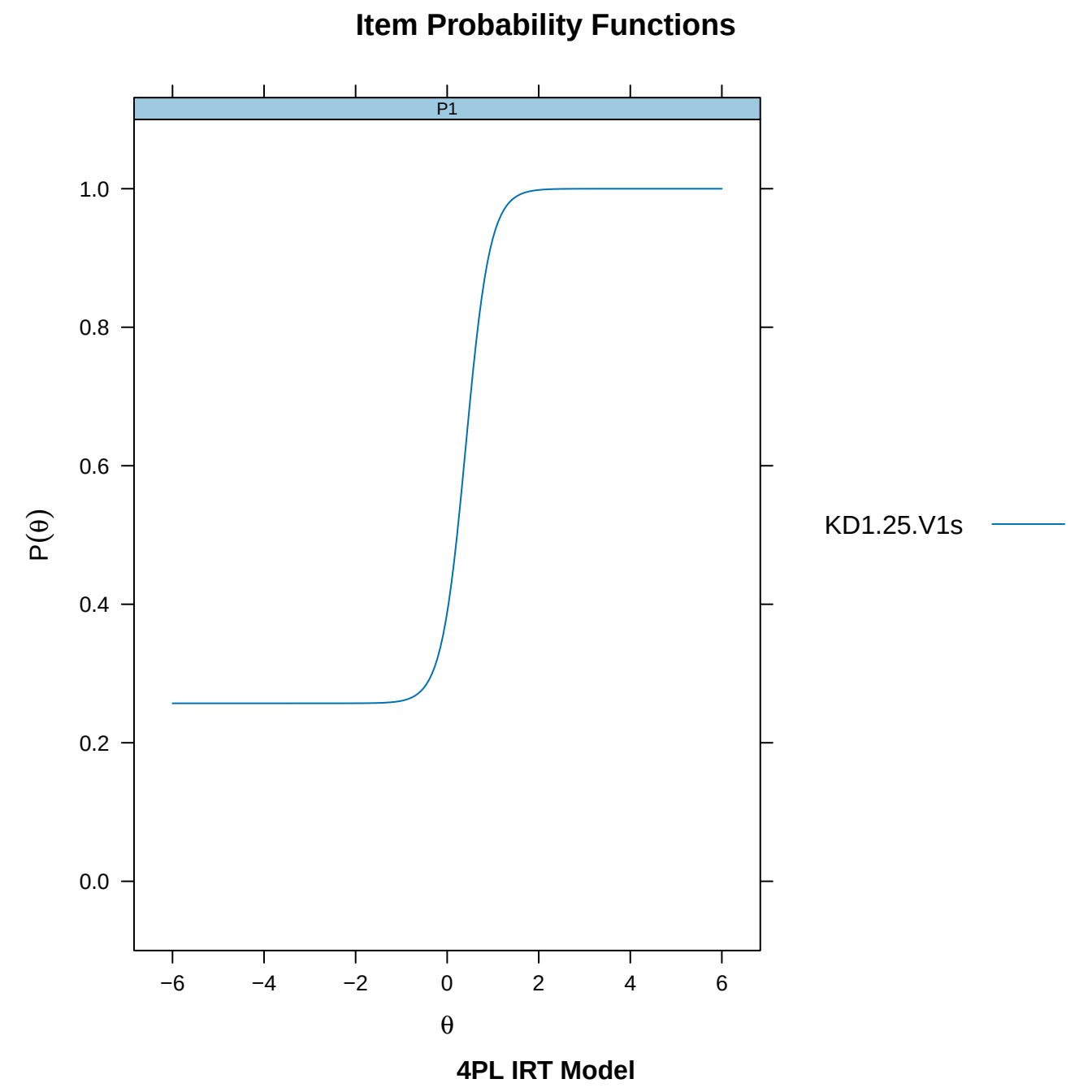

Item Probability Functions
P1
1.0
0.8
0.6
0.4
0.2
0.0
P(θ)
−6
−4
−2
0
2
4
6
θ
KD1.19.V1s
4PL IRT Model

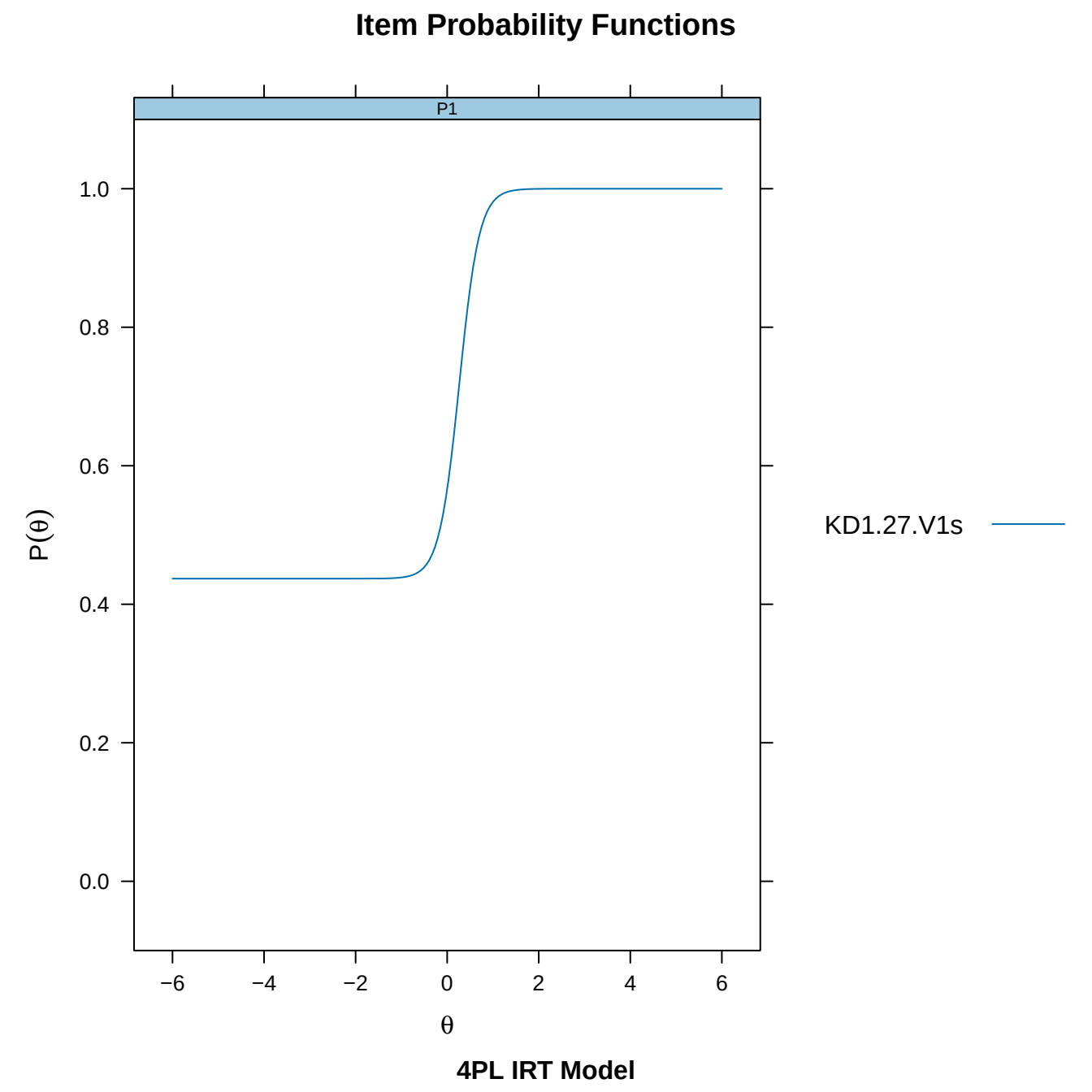

Item Probability Functions
P1
1.0
0.8
0.6
0.4
0.2
0.0
P(θ)
−6
−4
−2
0
2
4
6
θ
KD1.20.V2ECs
4PL IRT Model

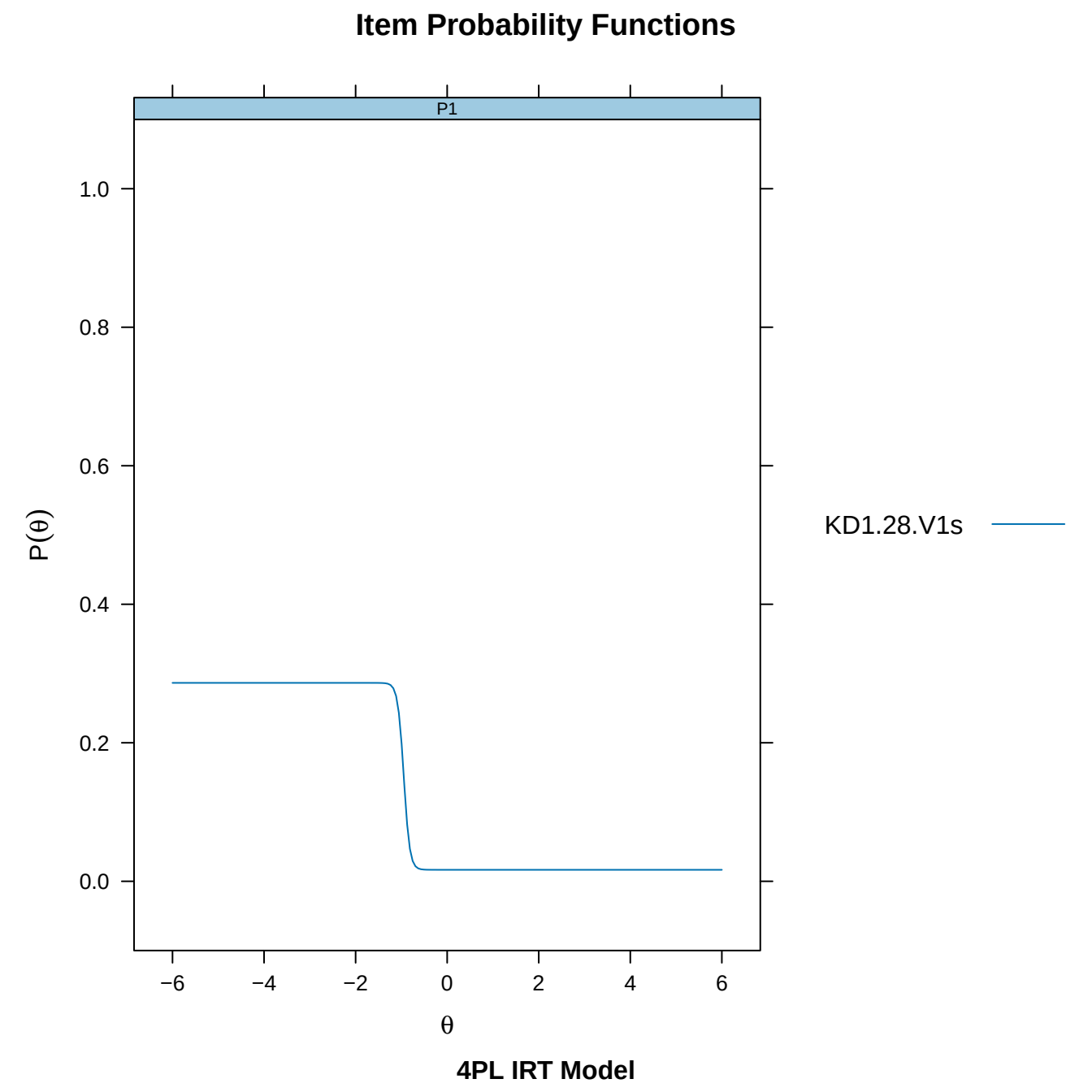

Item Probability Functions
P1
1.0
0.8
0.6
0.4
0.2
0.0
P(θ)
−6
−4
−2
0
2
4
6
θ
KD1.22.V2ECs
4PL IRT Model

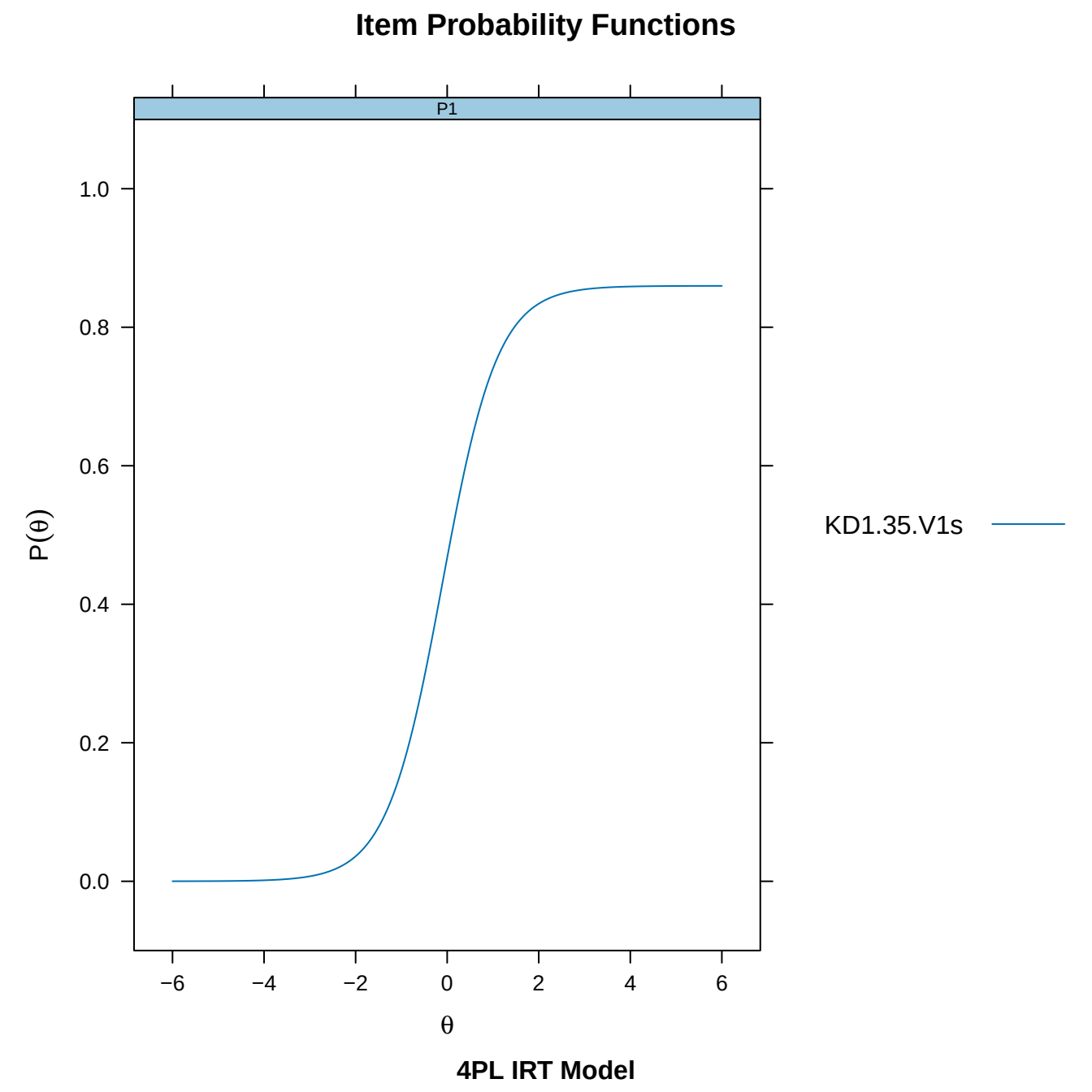

Item Probability Functions
P1
1.0
0.8
0.6
0.4
0.2
0.0
P(θ)
−6
−4
−2
0
2
4
6
θ
KD1.23.V2s
4PL IRT Model

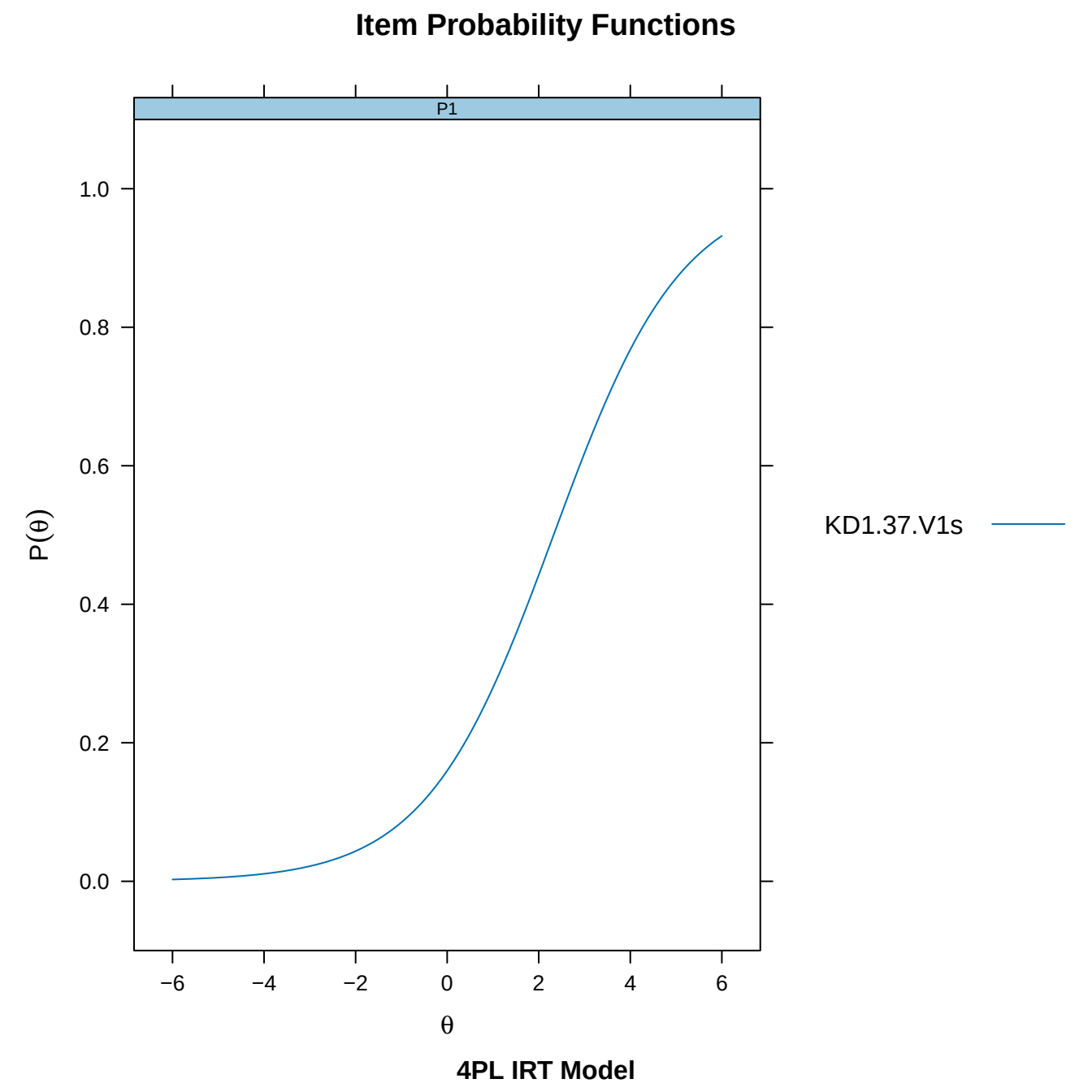

Item Probability Functions
P1
1.0
0.8
0.6
0.4
0.2
0.0
P(θ)
−6
−4
−2
0
2
4
6
θ
KD1.24.V1s
4PL IRT Model

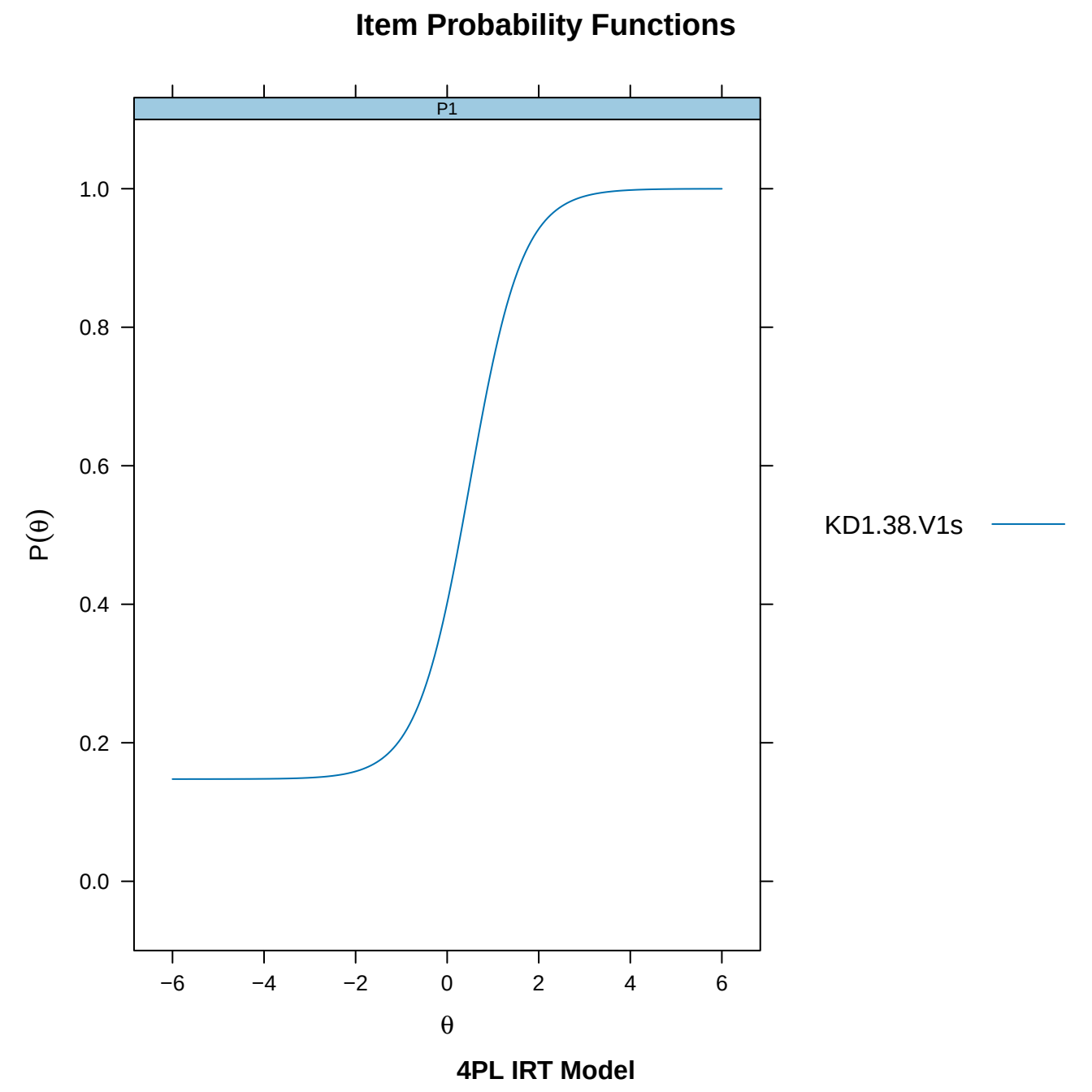

Item Probability Functions
P1
1.0
0.8
0.6
0.4
0.2
0.0
P(θ)
−6
−4
−2
0
2
4
6
θ
KD1.25.V1s
4PL IRT Model

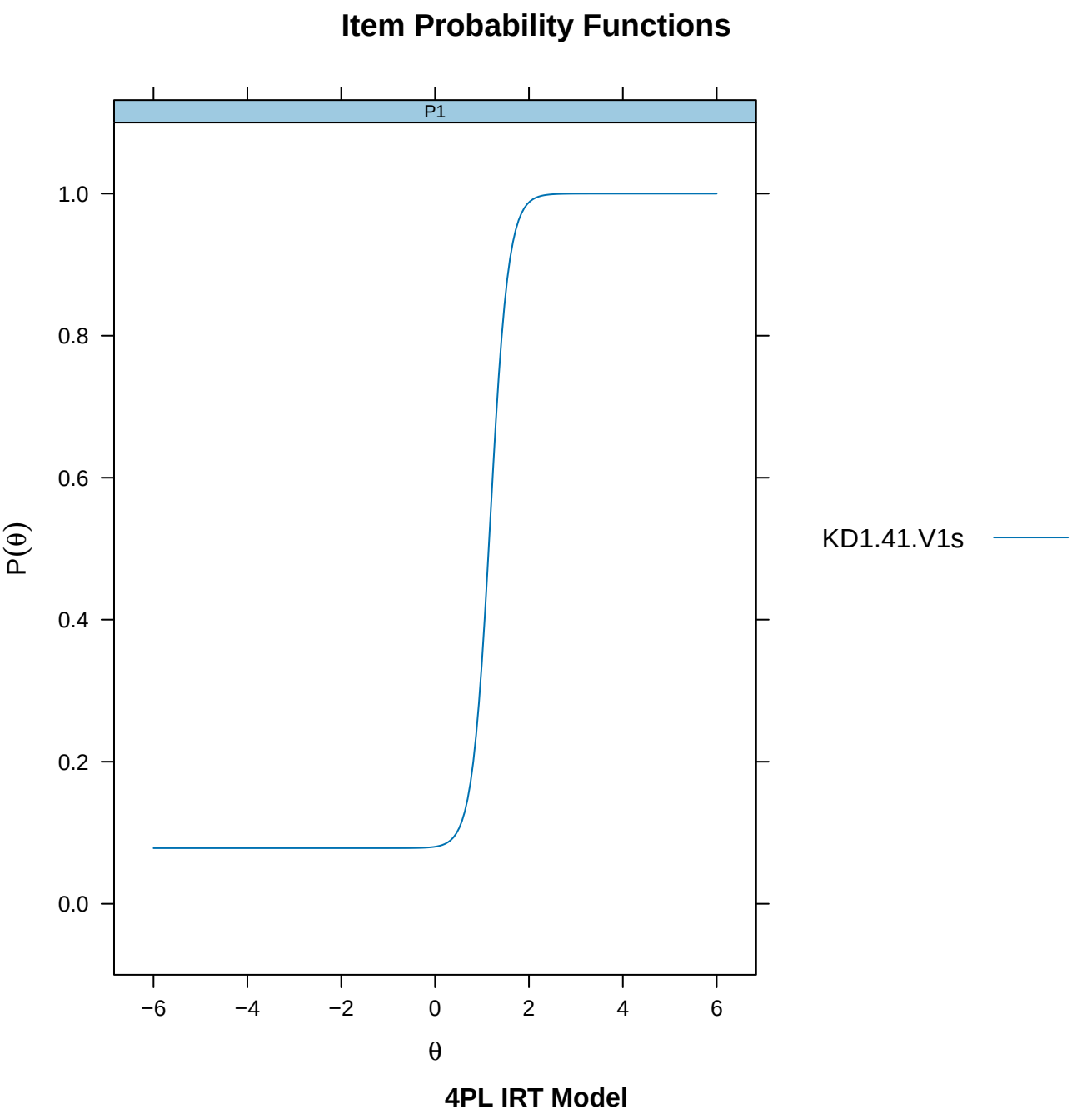

Item Probability Functions
P1
1.0
0.8
0.6
0.4
0.2
0.0
P(θ)
−6
−4
−2
0
2
4
6
θ
KD1.27.V1s
4PL IRT Model

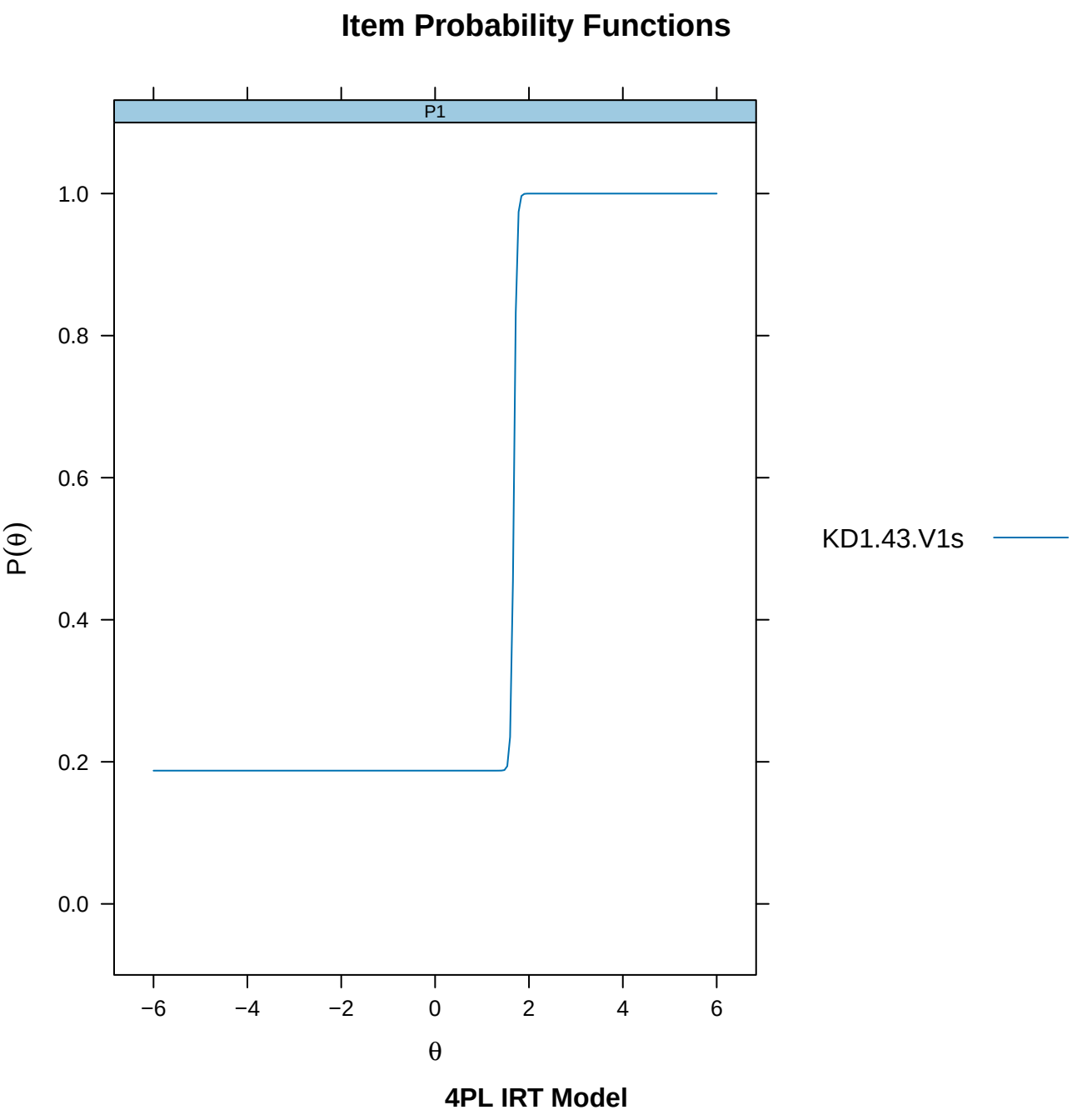

Item Probability Functions
P1
1.0
0.8
0.6
0.4
0.2
0.0
P(θ)
−6
−4
−2
0
2
4
6
θ
KD1.28.V1s
4PL IRT Model

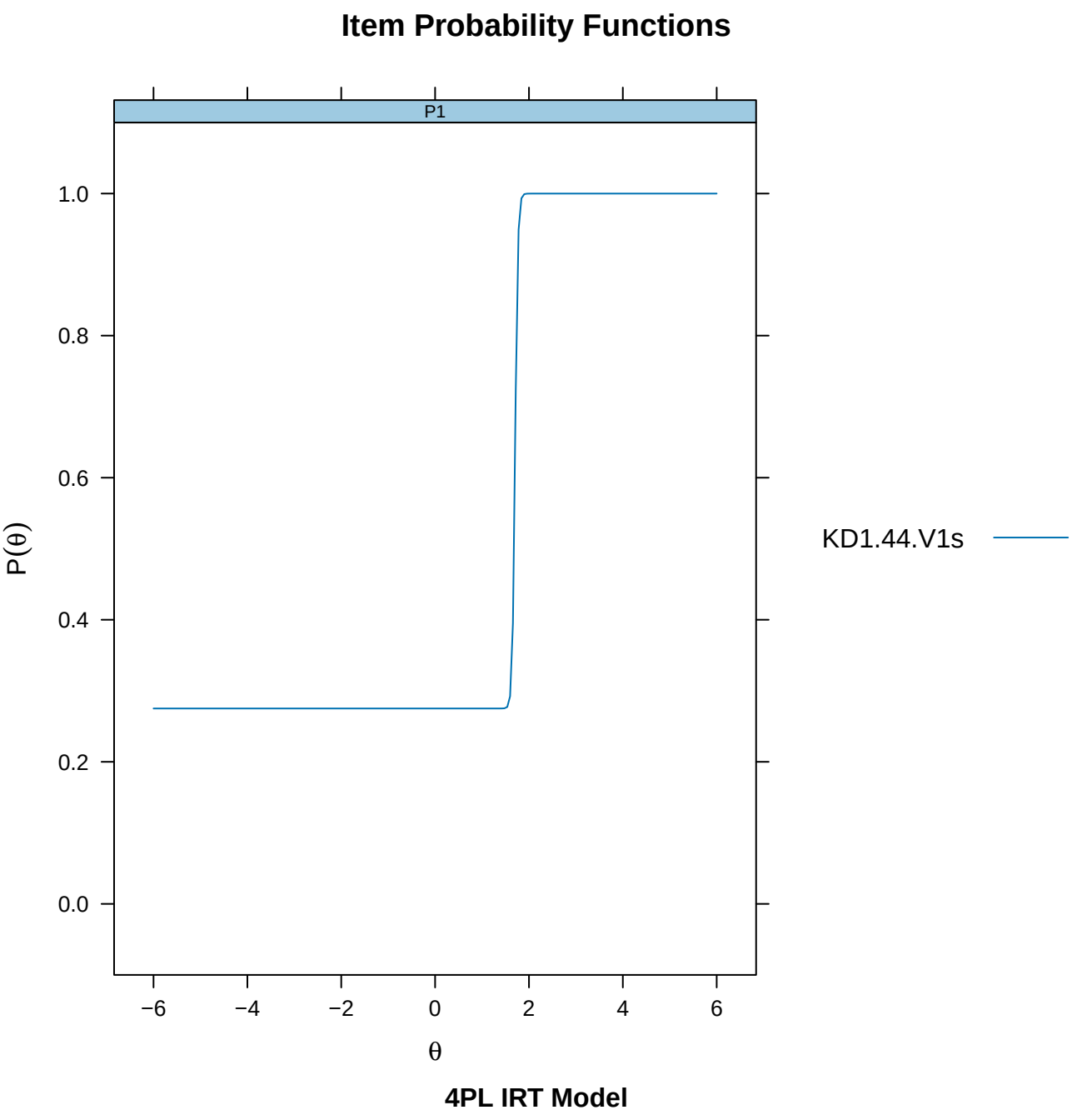

Item Probability Functions
P1
1.0
0.8
0.6
0.4
0.2
0.0
P(θ)
−6
−4
−2
0
2
4
6
θ
KD1.35.V1s
4PL IRT Model

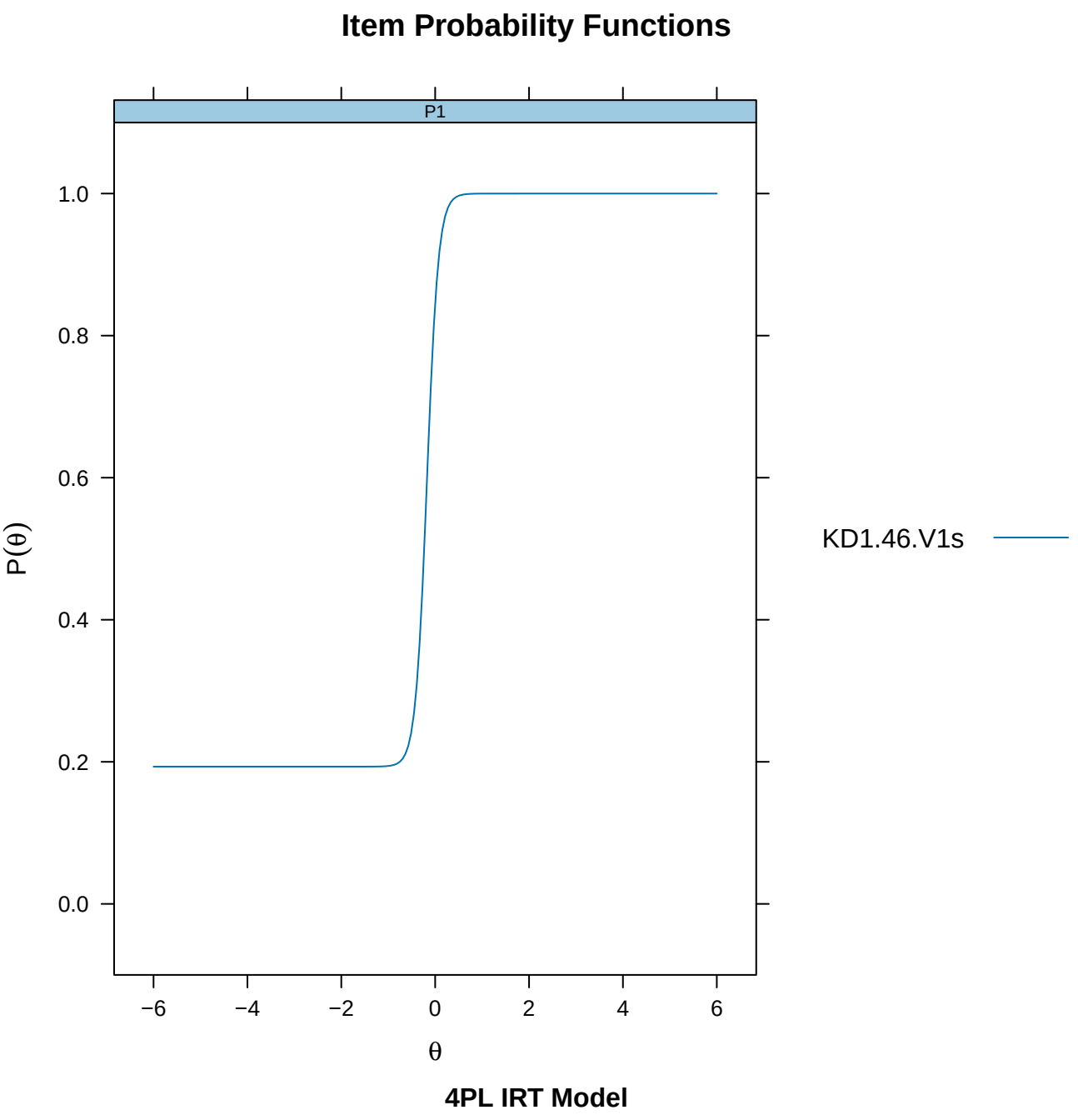

Item Probability Functions
P1
1.0
0.8
0.6
0.4
0.2
0.0
P(θ)
−6
−4
−2
0
2
4
6
θ
KD1.37.V1s
4PL IRT Model

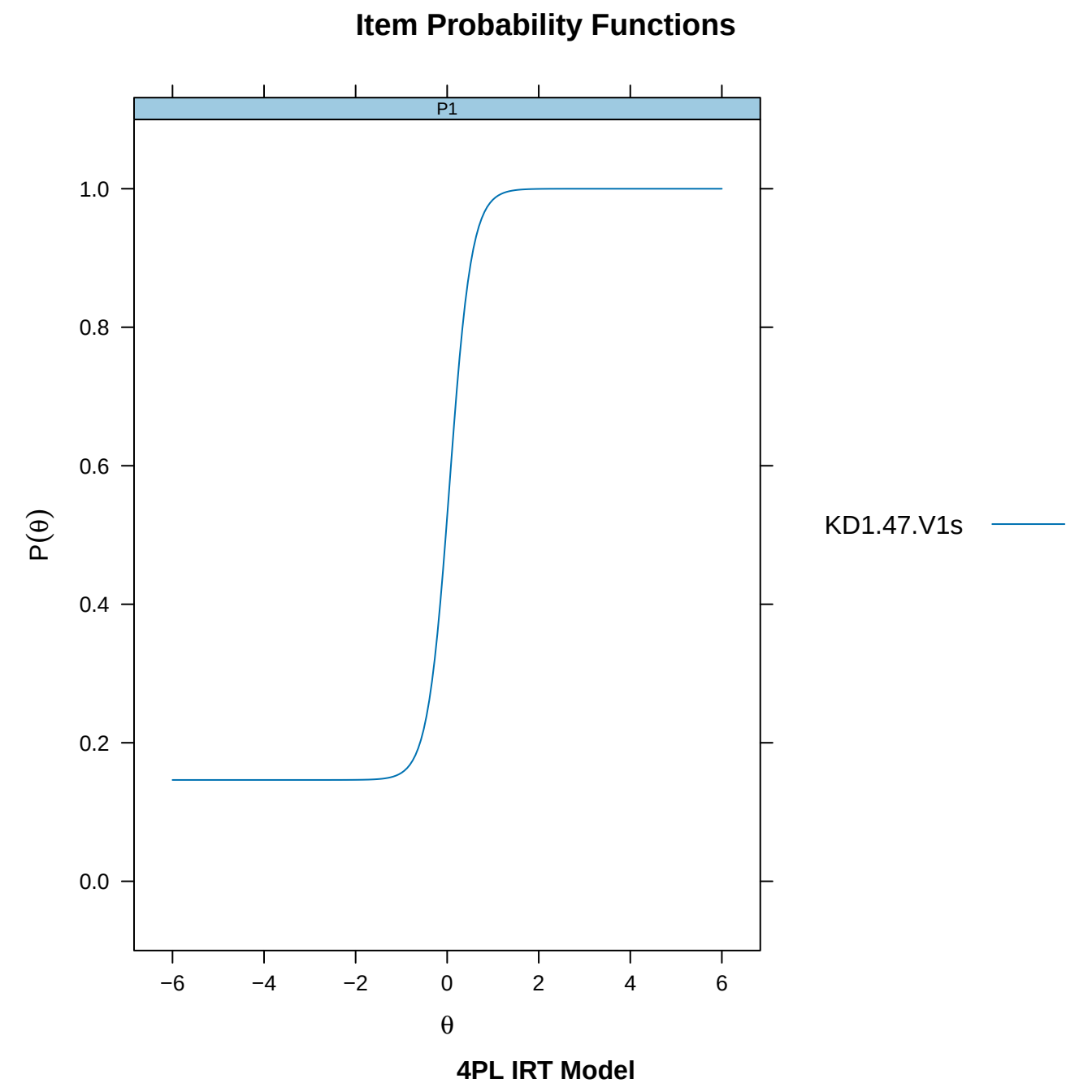

Item Probability Functions
P1
1.0
0.8
0.6
0.4
0.2
0.0
P(θ)
−6
−4
−2
0
2
4
6
θ
KD1.38.V1s
4PL IRT Model

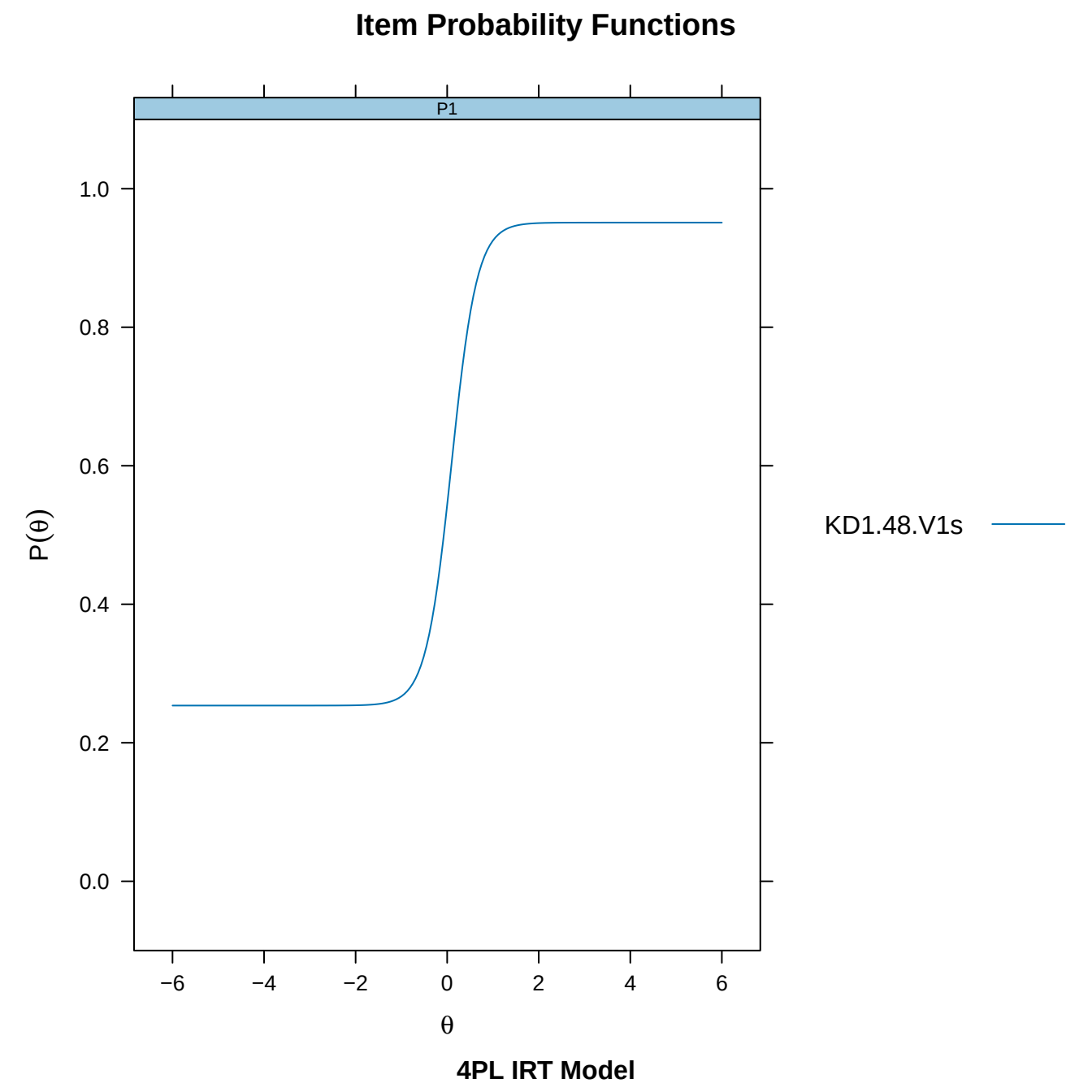

Item Probability Functions
P1
1.0
0.8
0.6
0.4
0.2
0.0
P(θ)
−6
−4
−2
0
2
4
6
θ
KD1.41.V1s
4PL IRT Model

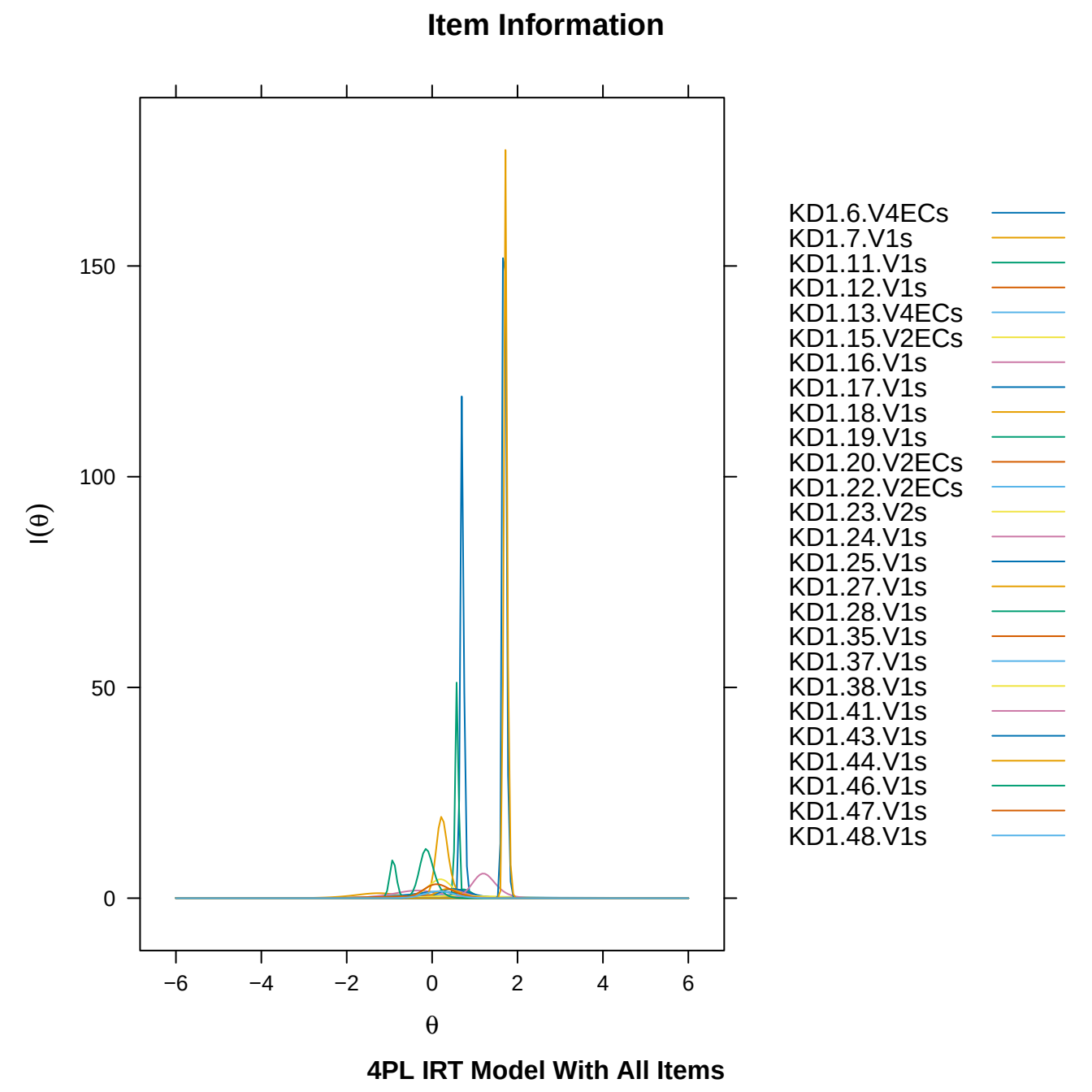

Item Probability Functions
P1
1.0
0.8
0.6
0.4
0.2
0.0
P(θ)
−6
−4
−2
0
2
4
6
θ
KD1.43.V1s
4PL IRT Model

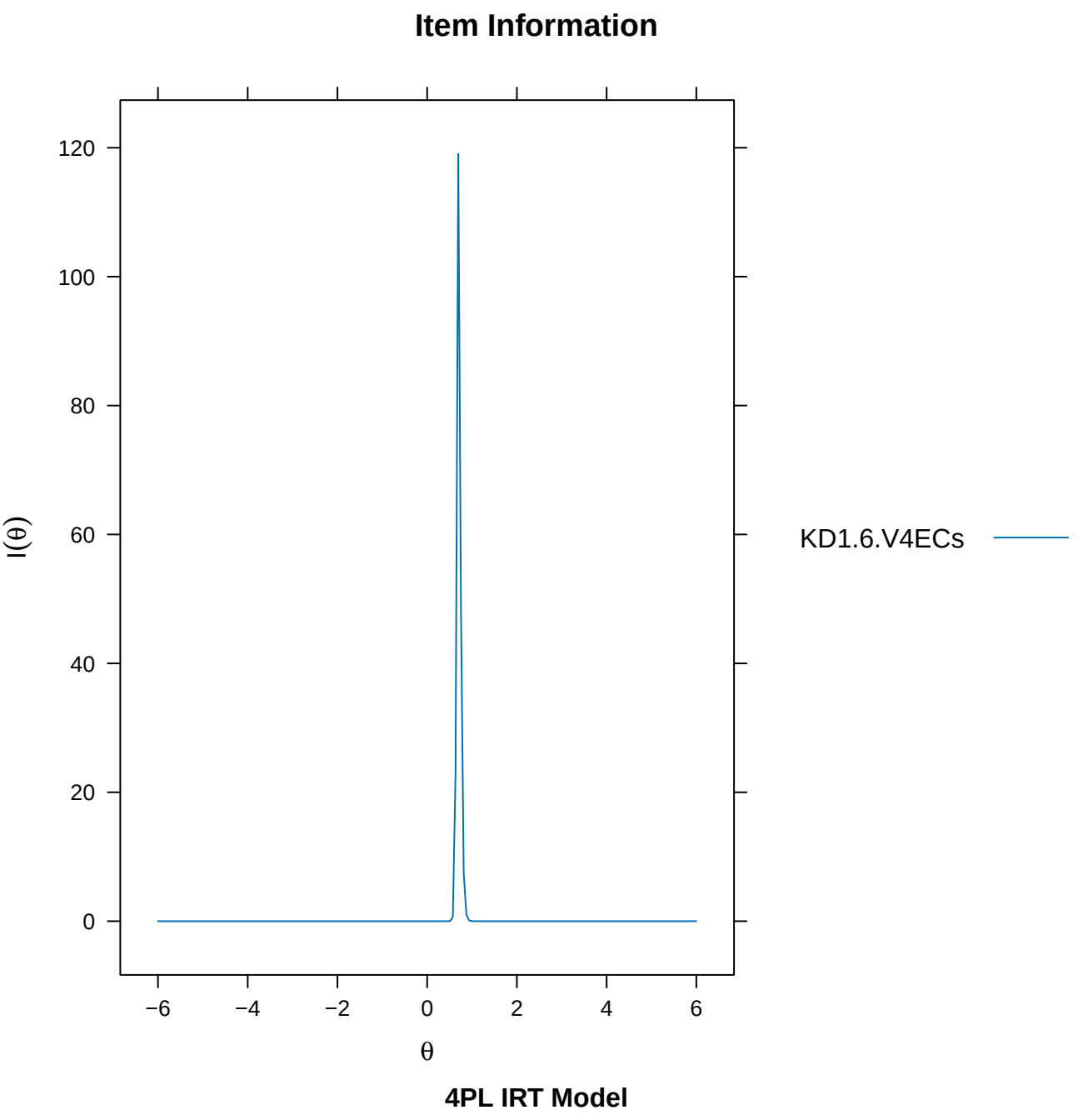

Item Probability Functions
P1
1.0
0.8
0.6
0.4
0.2
0.0
P(θ)
−6
−4
−2
0
2
4
6
θ
KD1.44.V1s
4PL IRT Model

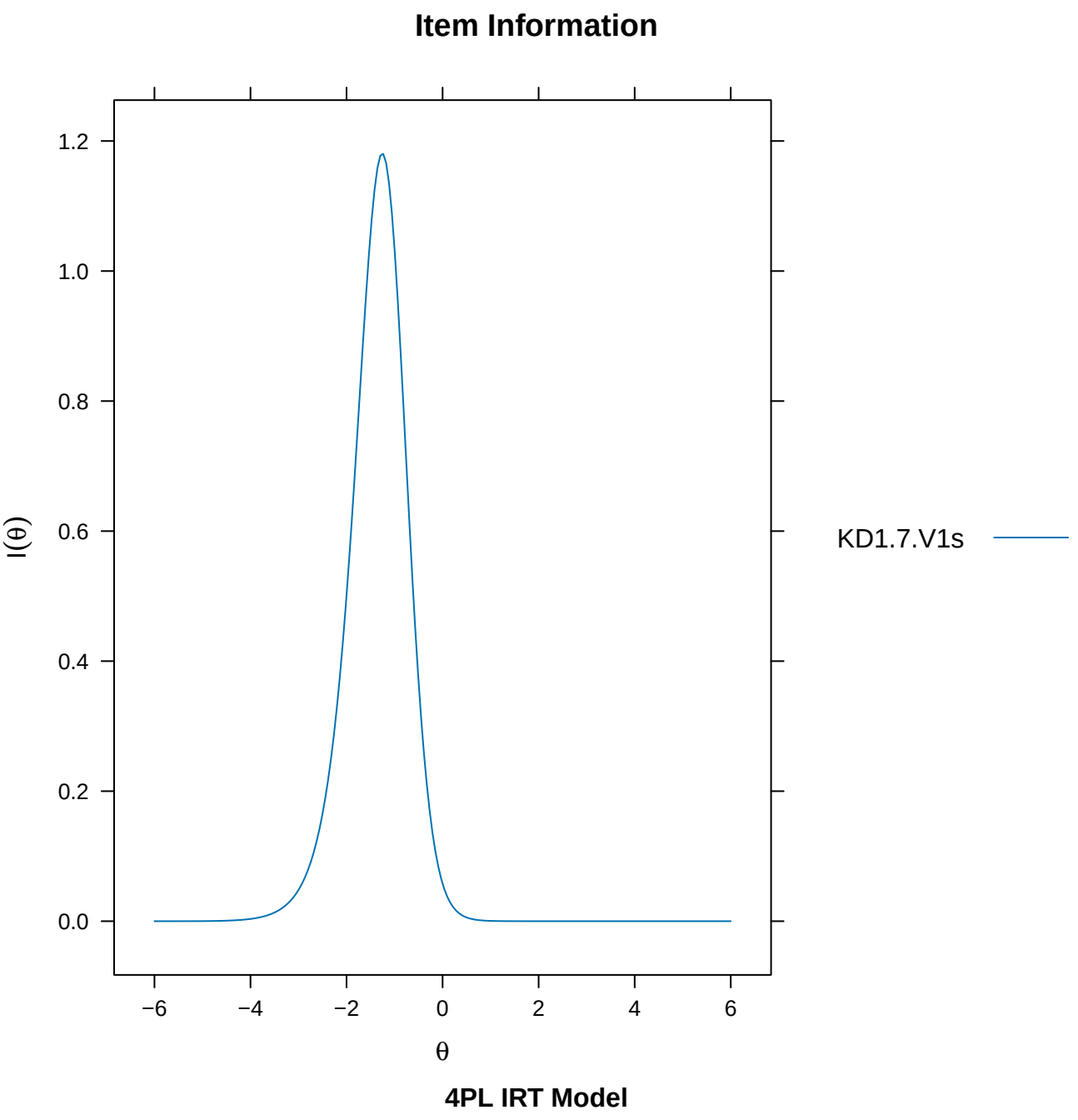

Item Probability Functions
P1
1.0
0.8
0.6
0.4
0.2
0.0
P(θ)
−6
−4
−2
0
2
4
6
θ
KD1.46.V1s
4PL IRT Model

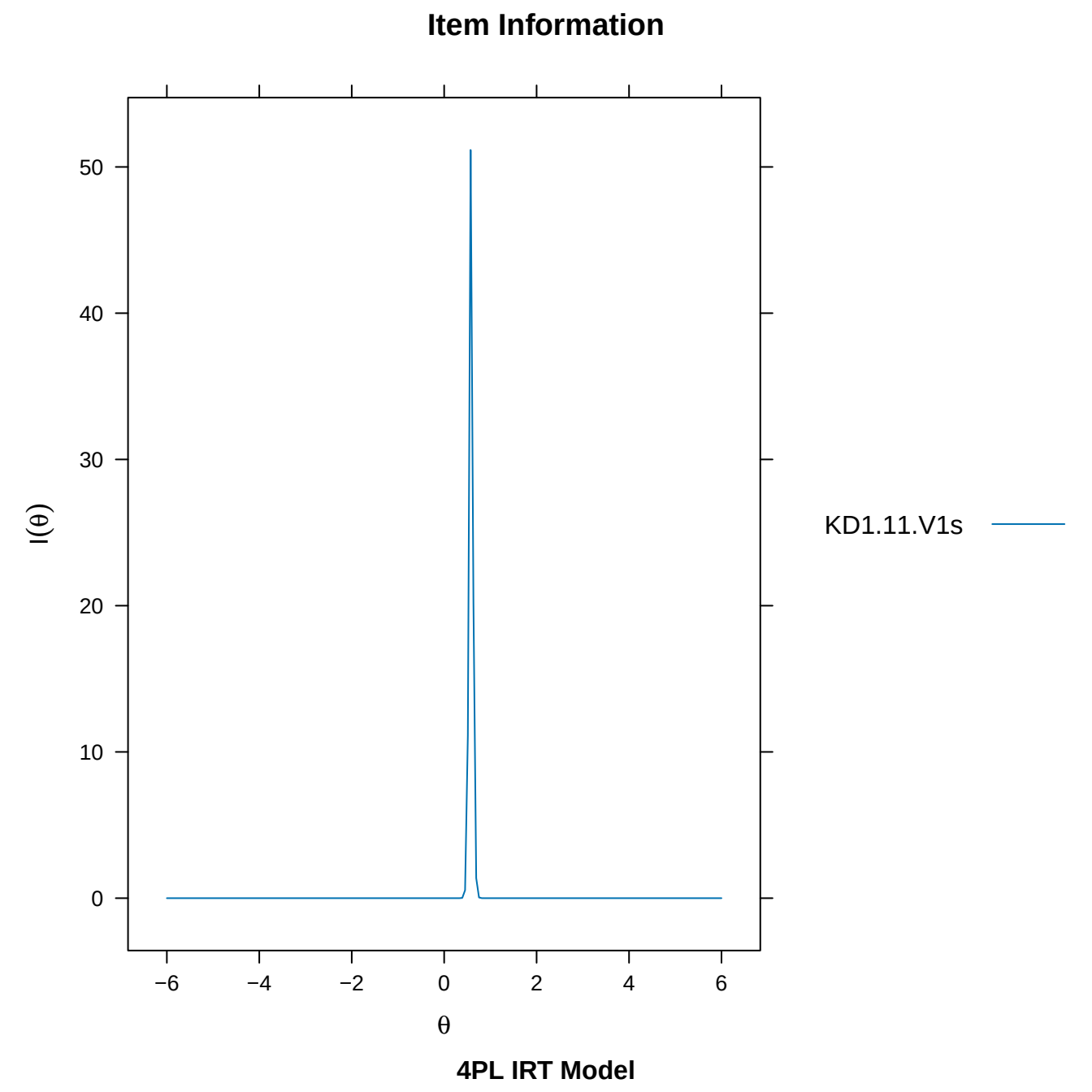

Item Probability Functions
P1
1.0
0.8
0.6
0.4
0.2
0.0
P(θ)
−6
−4
−2
0
2
4
6
θ
KD1.47.V1s
4PL IRT Model

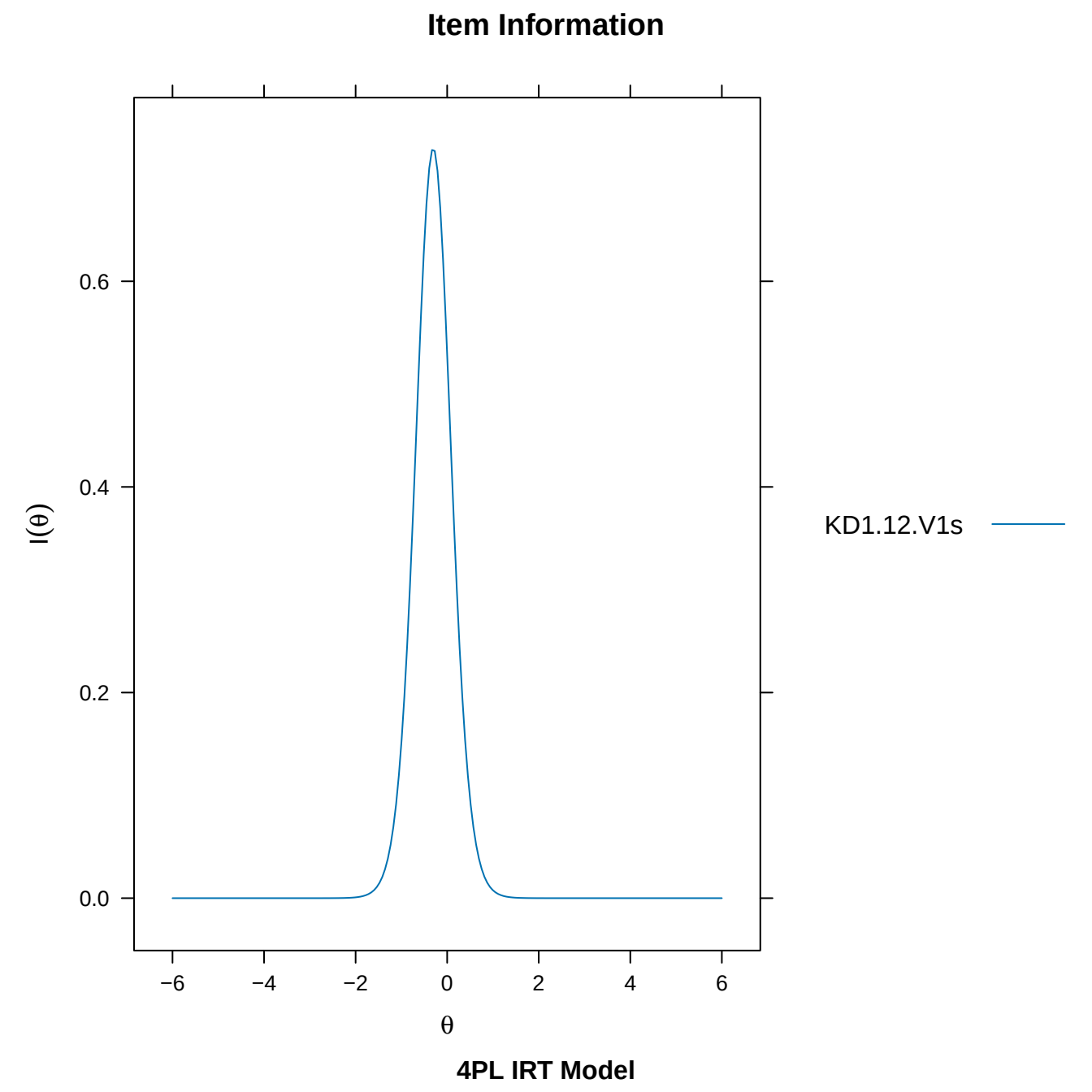

Item Probability Functions
P1
1.0
0.8
0.6
0.4
0.2
0.0
P(θ)
−6
−4
−2
0
2
4
6
θ
KD1.48.V1s
4PL IRT Model

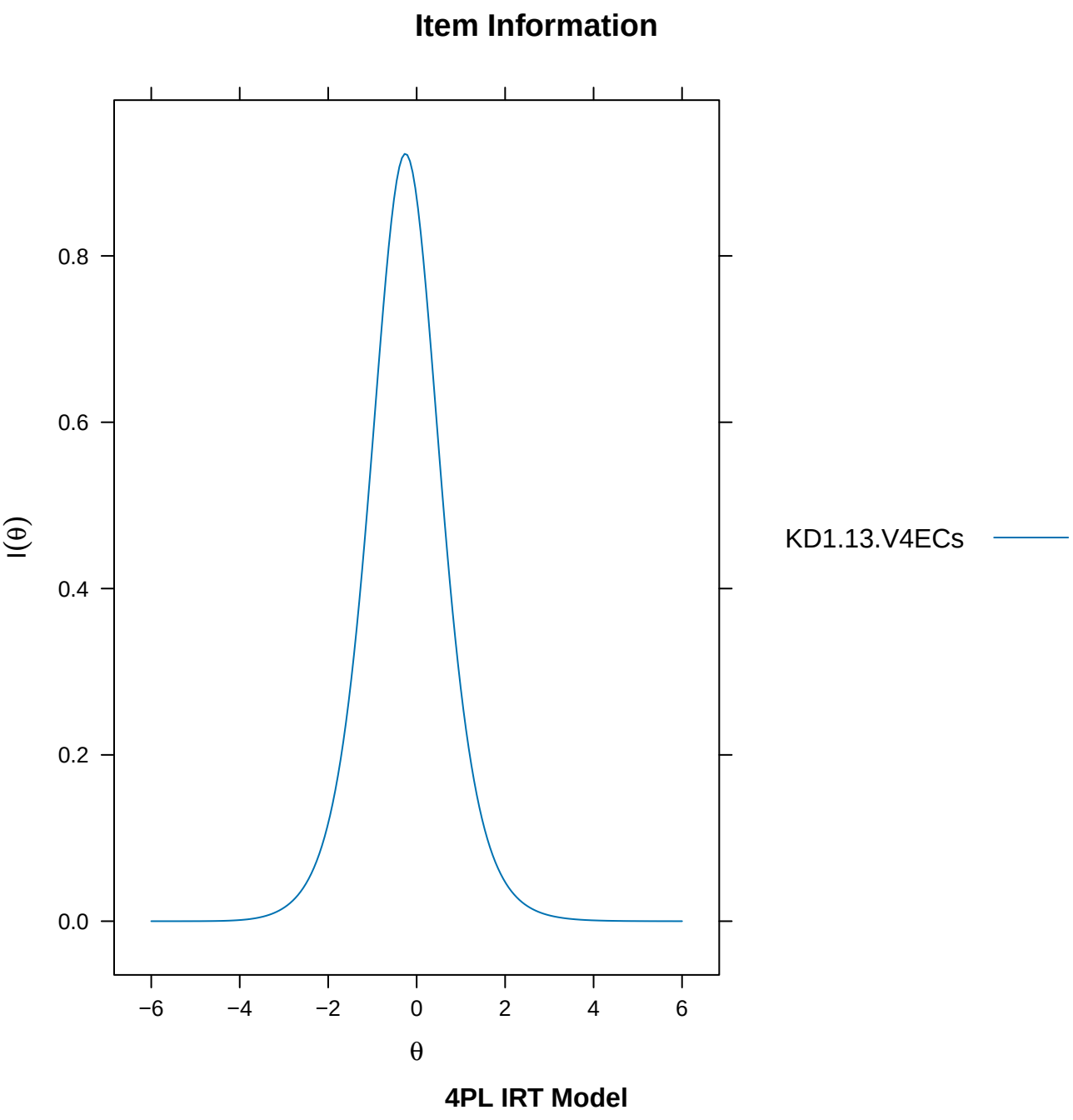

Item Information
I(θ)
150
100
50
0
−6
−4
−2
0
2
4
6
θ
KD1.6.V4ECs
KD1.7.V1s
KD1.11.V1s
KD1.12.V1s
KD1.13.V4ECs
KD1.15.V2ECs
KD1.16.V1s
KD1.17.V1s
KD1.18.V1s
KD1.19.V1s
KD1.20.V2ECs
KD1.22.V2ECs
KD1.23.V2s
KD1.24.V1s
KD1.25.V1s
KD1.27.V1s
KD1.28.V1s
KD1.35.V1s
KD1.37.V1s
KD1.38.V1s
KD1.41.V1s
KD1.43.V1s
KD1.44.V1s
KD1.46.V1s
KD1.47.V1s
KD1.48.V1s
4PL IRT Model With All Items

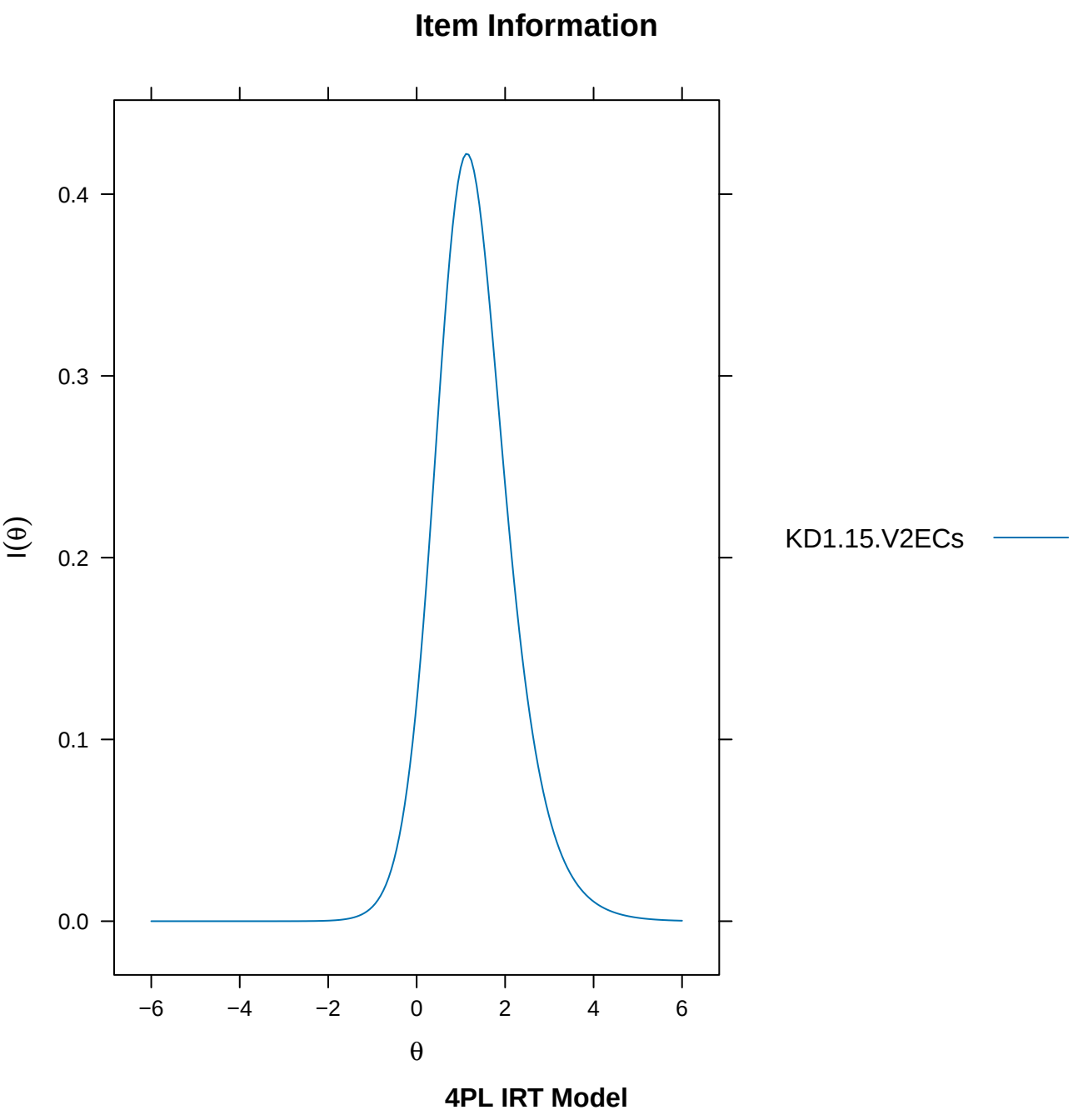

Item Information
120
100
80
60
40
20
0
I(θ)
−6
−4
−2
0
2
4
6
θ
KD1.6.V4ECs
4PL IRT Model

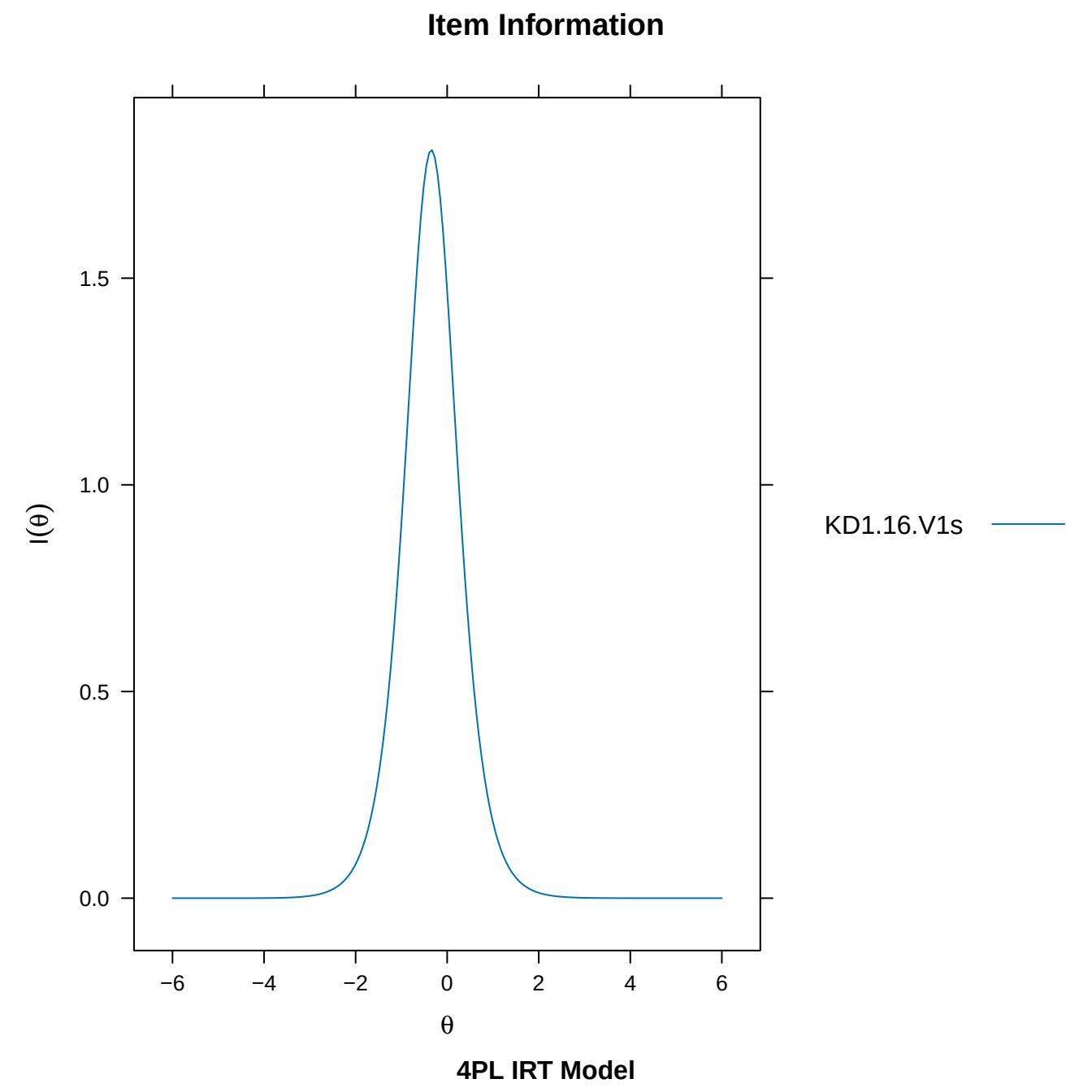

Item Information
1.2
1.0
0.8
0.6
0.4
0.2
0.0
I(θ)
−6
−4
−2
0
2
4
6
θ
KD1.7.V1s
4PL IRT Model

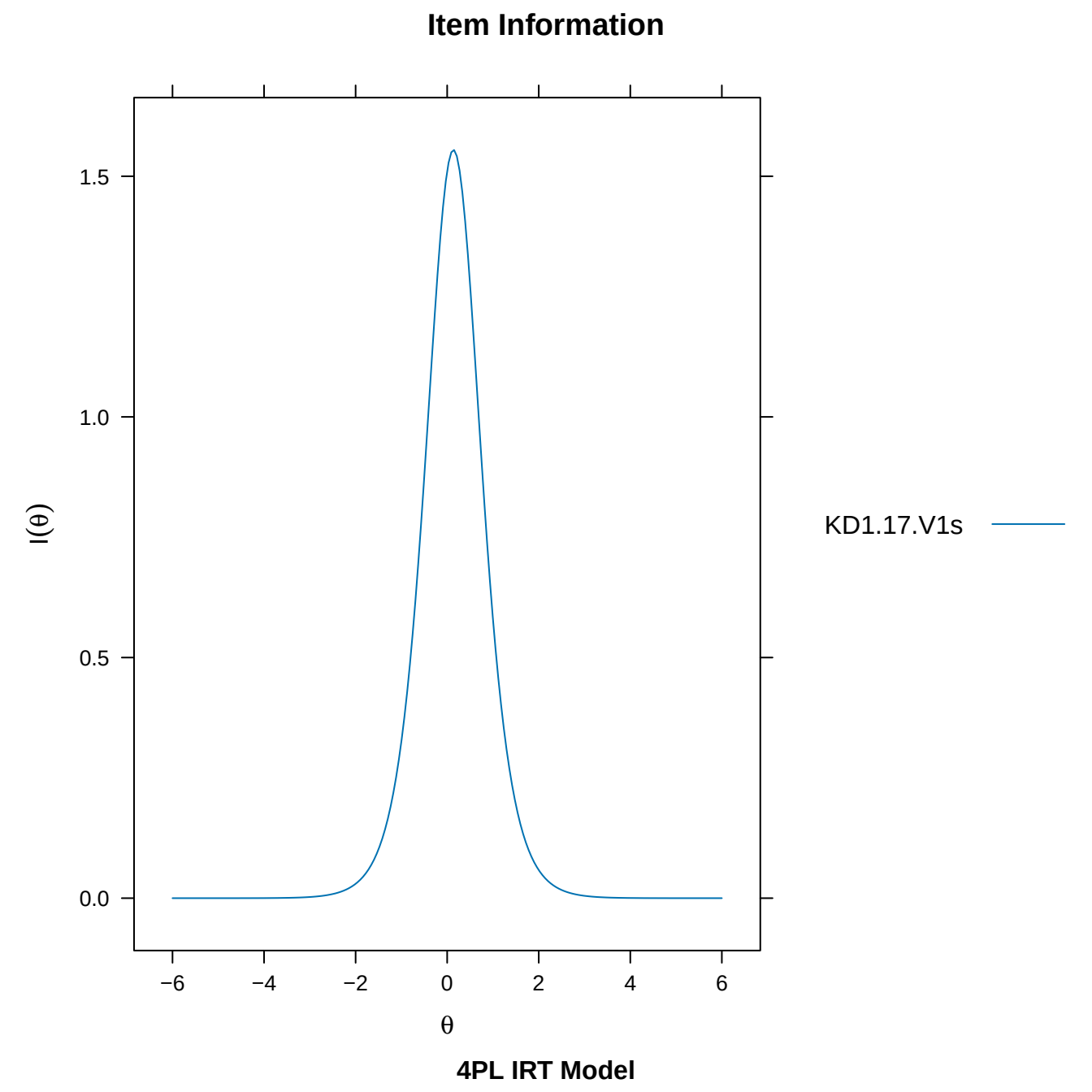

Item Information
50
40
30
20
10
0
I(θ)
−6
−4
−2
0
2
4
6
θ
KD1.11.V1s
4PL IRT Model

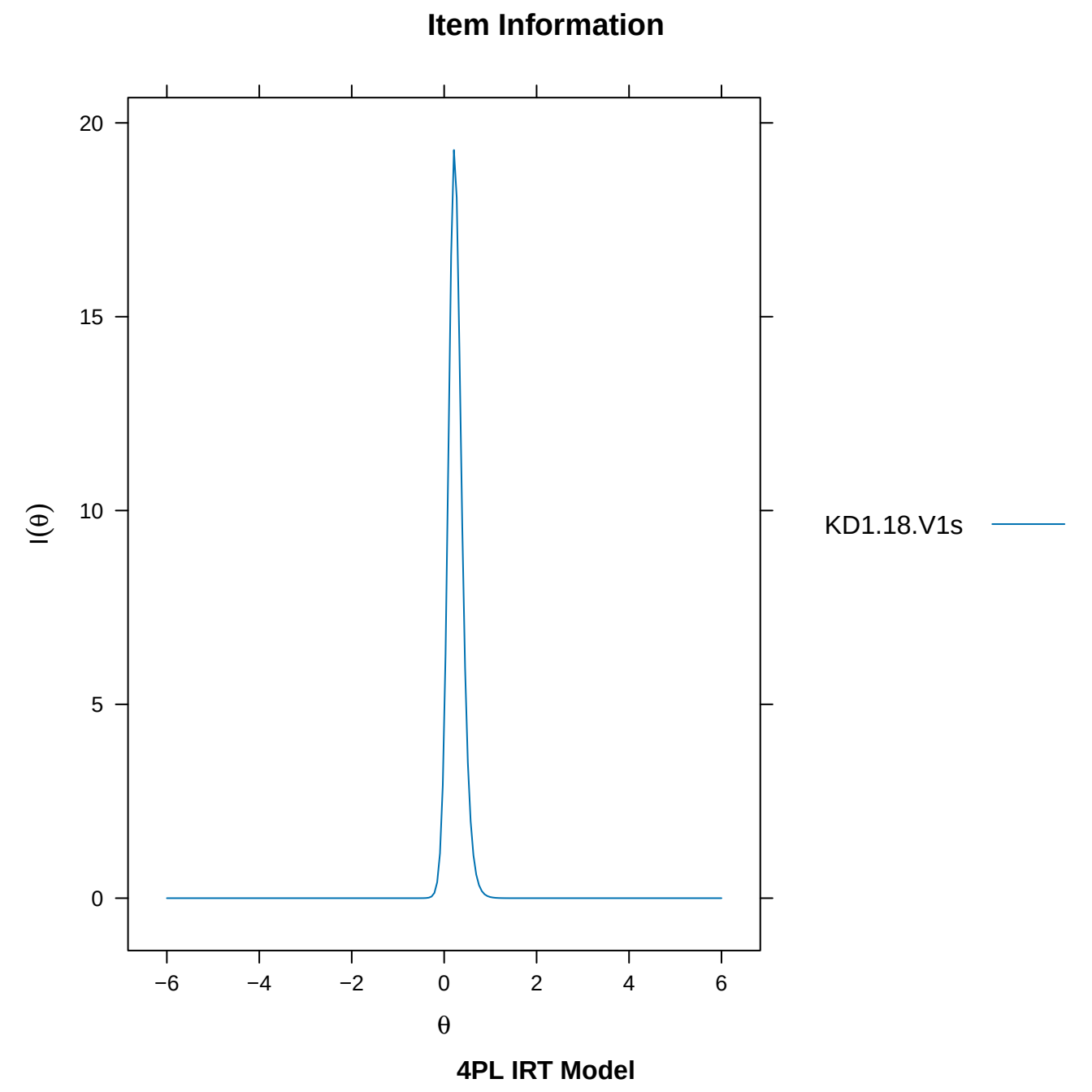

Item Information
I(θ)
0.0
0.2
0.4
0.6
−6
−4
−2
0
2
4
6
θ
KD1.12.V1s
4PL IRT Model

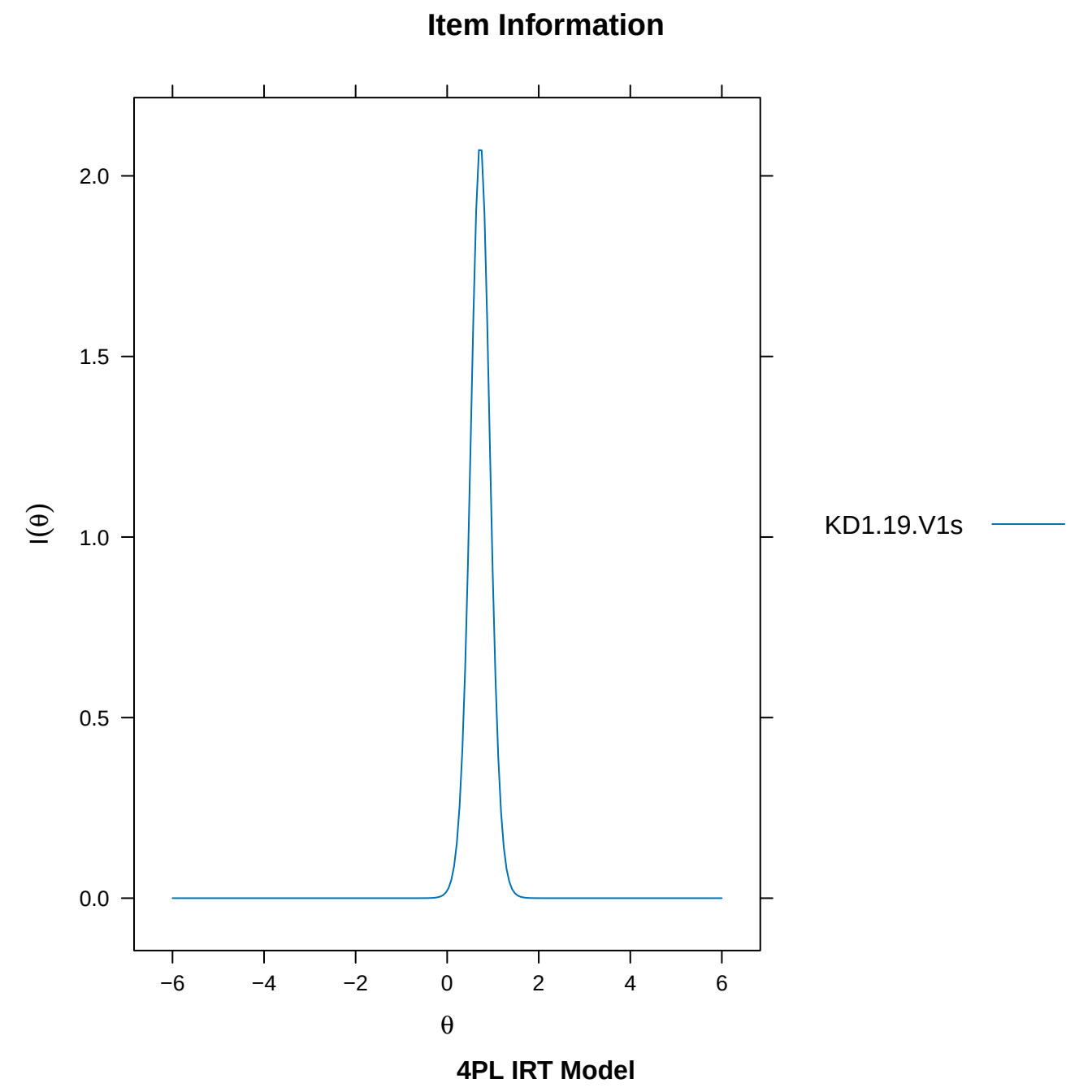

Item Information
0.8
0.6
0.4
0.2
0.0
I(θ)
−6
−4
−2
0
2
4
6
θ
KD1.13.V4ECs
4PL IRT Model

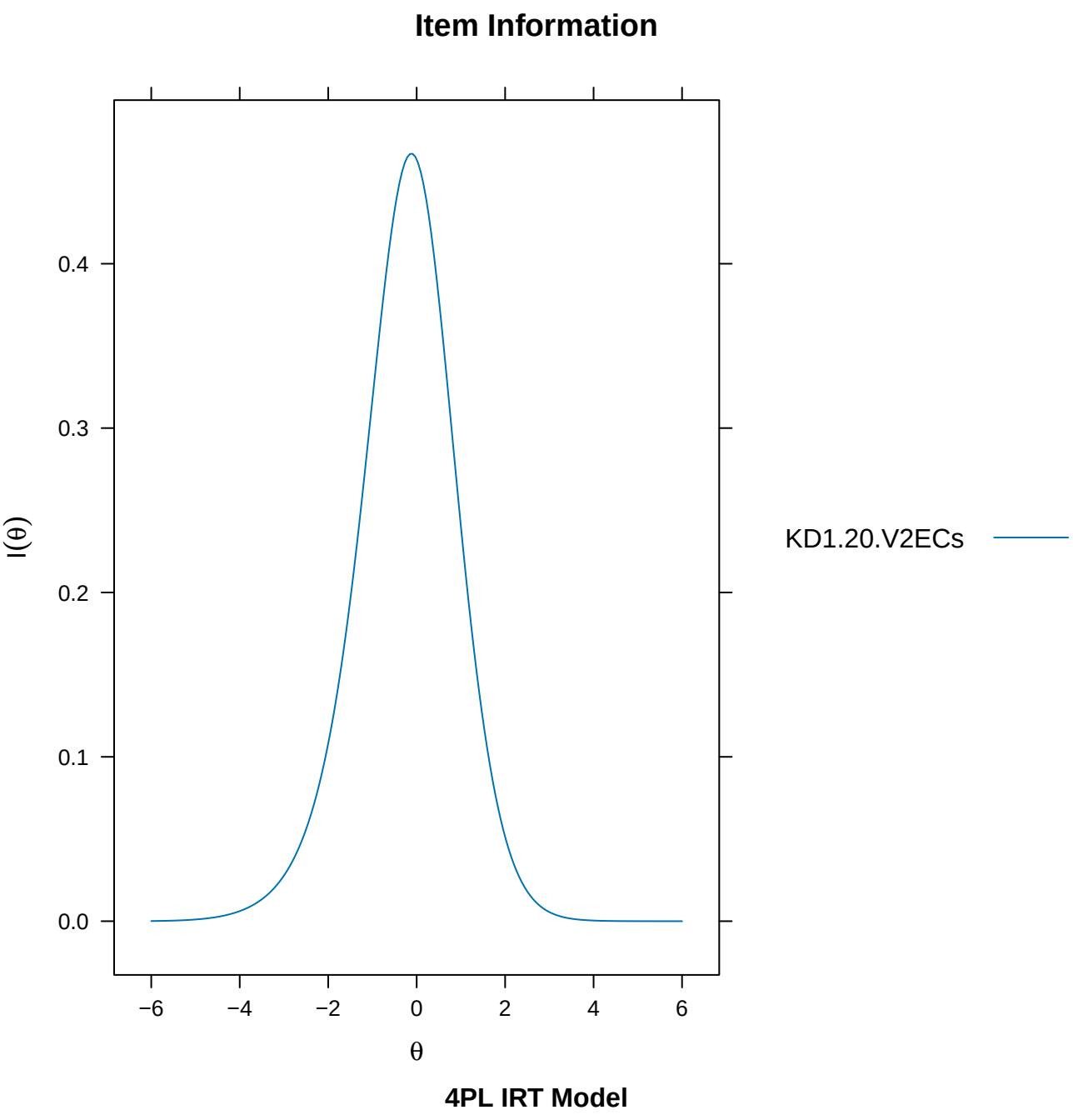

Item Information
0.4
0.3
0.2
0.1
0.0
I(θ)
−6
−4
−2
0
2
4
6
θ
KD1.15.V2ECs
4PL IRT Model

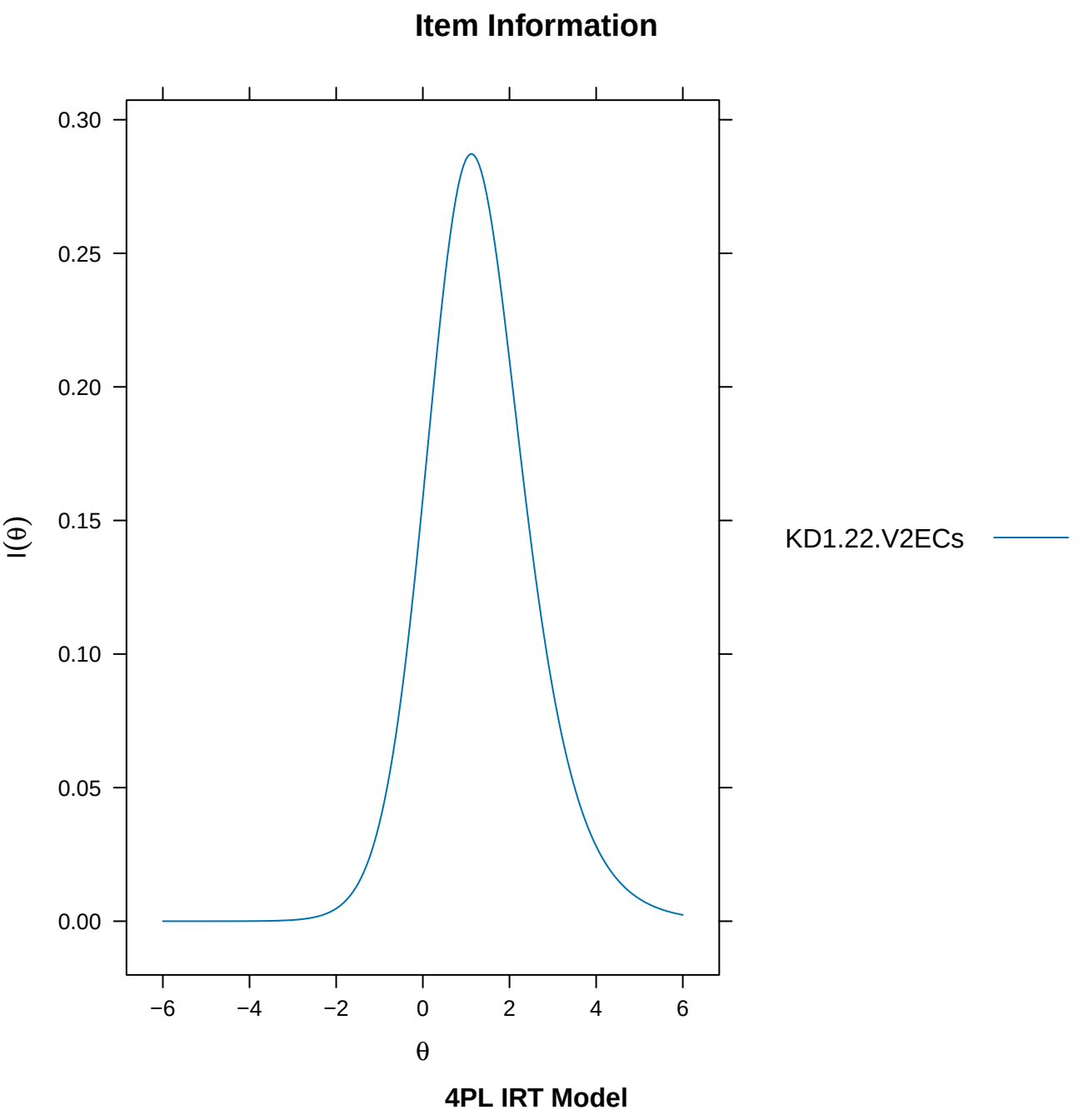

Item Information
1.5
1.0
0.5
0.0
I(θ)
−6
−4
−2
0
2
4
6
θ
KD1.16.V1s
4PL IRT Model

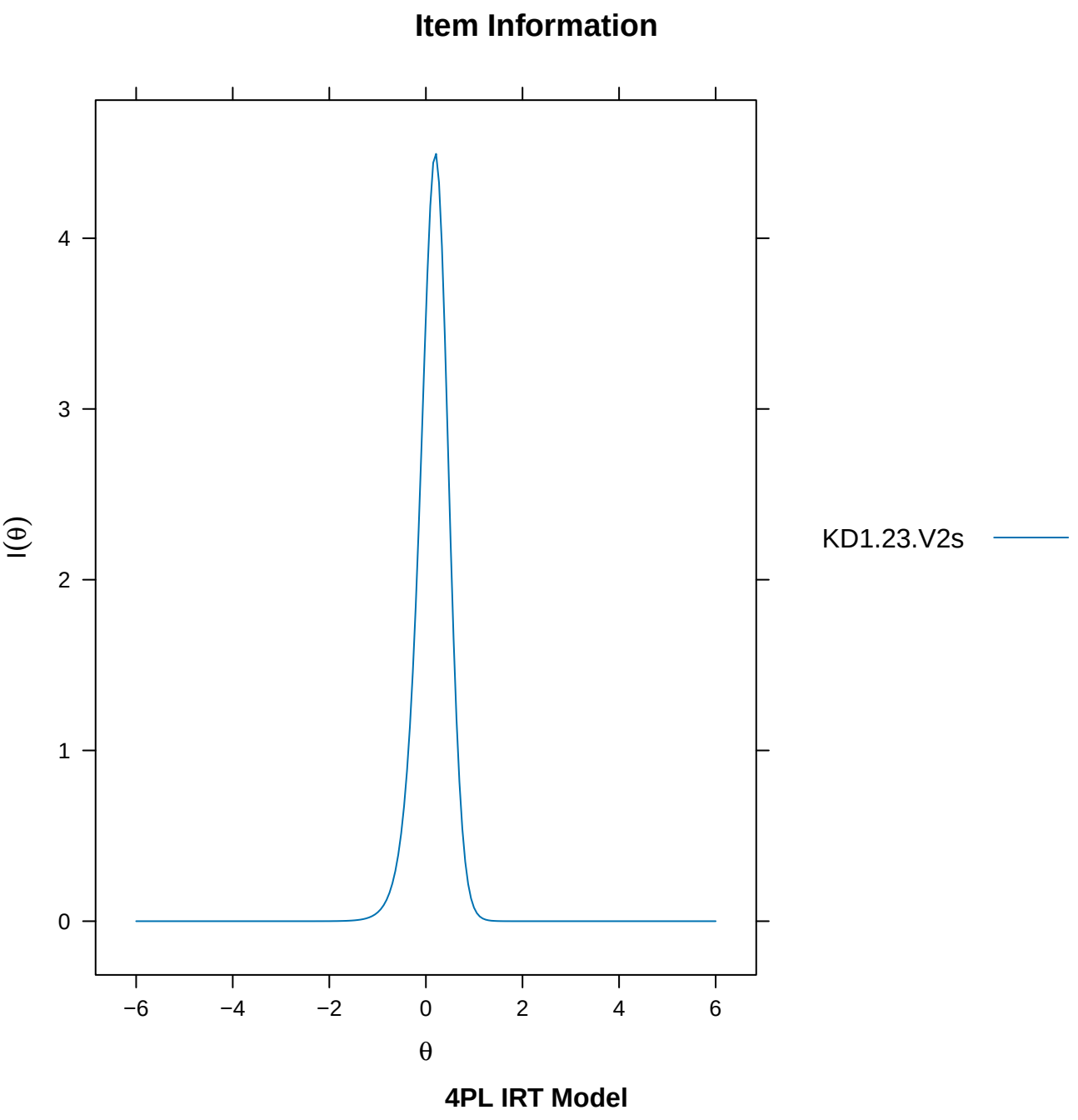

Item Information
1.5
1.0
0.5
0.0
I(θ)
−6
−4
−2
0
2
4
6
θ
KD1.17.V1s
4PL IRT Model

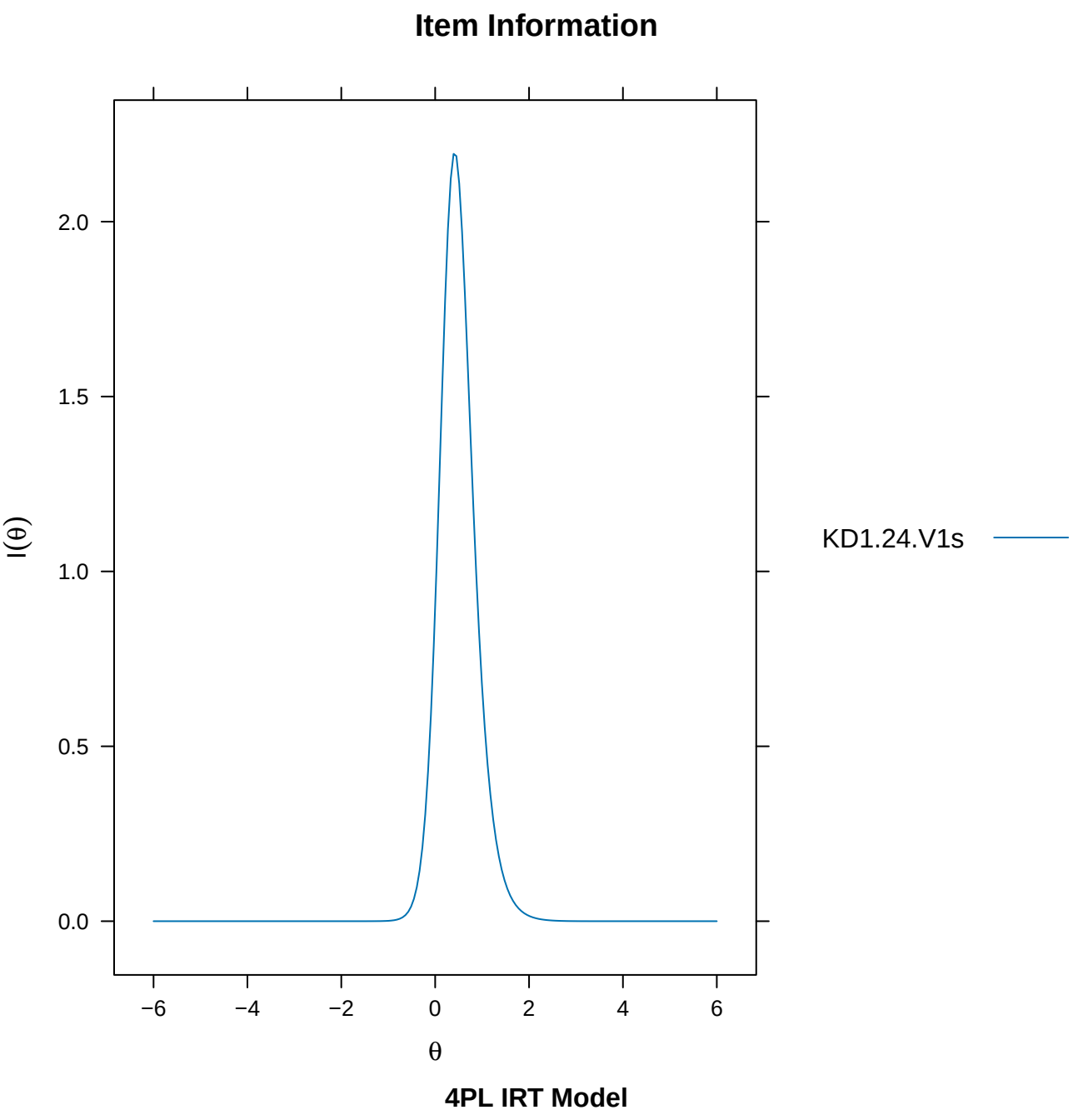

Item Information
20
15
10
5
0
I(θ)
−6
−4
−2
0
2
4
6
θ
KD1.18.V1s
4PL IRT Model

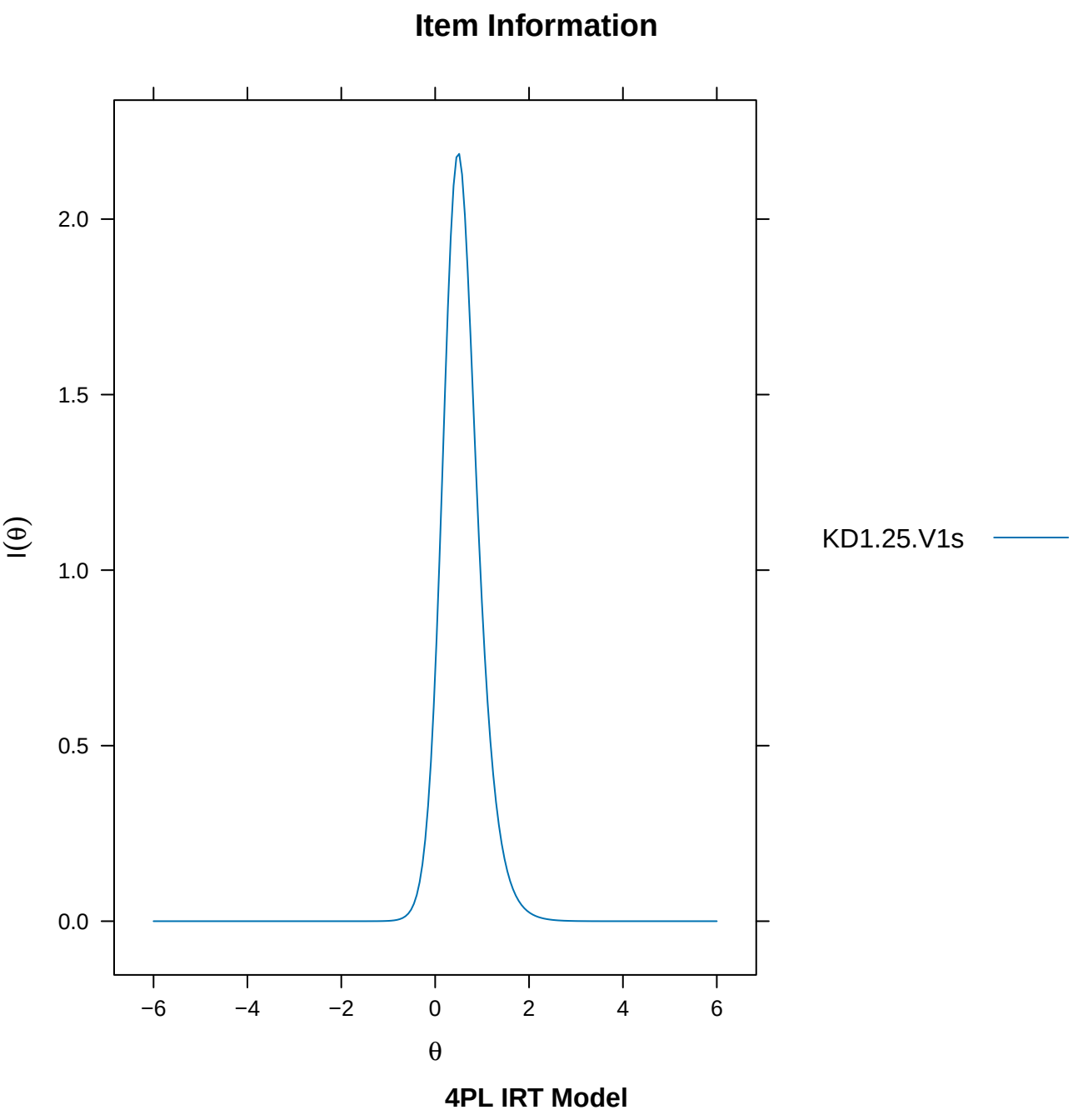

Item Information
2.0
1.5
1.0
0.5
0.0
I(θ)
−6
−4
−2
0
2
4
6
θ
KD1.19.V1s
4PL IRT Model

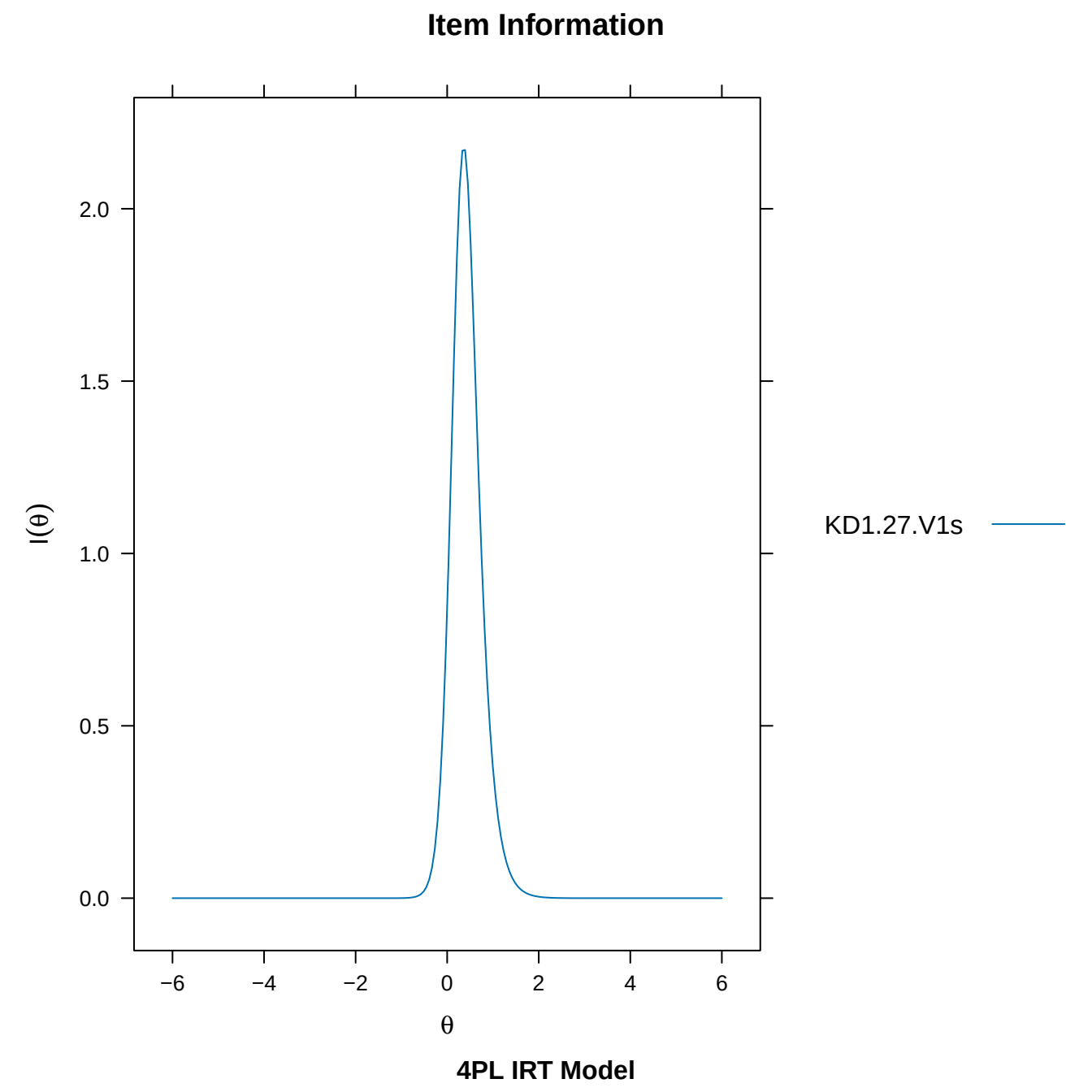

Item Information
I(θ)
0.0
0.1
0.2
0.3
0.4
−6
−4
−2
0
2
4
6
θ
4PL IRT Model
KD1.20.V2ECs

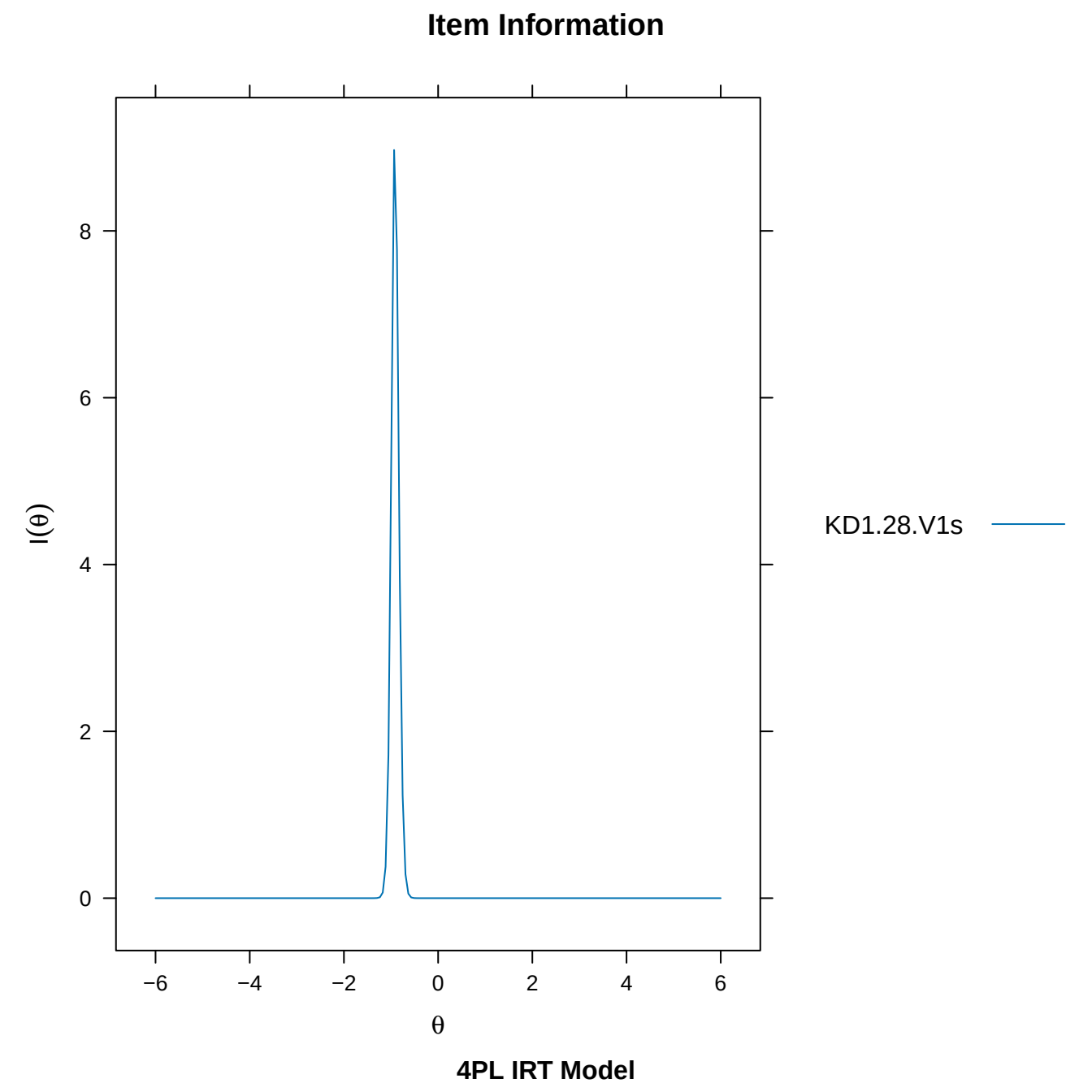

Item Information
0.30
0.25
0.20
0.15
0.10
0.05
0.00
I(θ)
−6
−4
−2
0
2
4
6
θ
KD1.22.V2ECs
4PL IRT Model

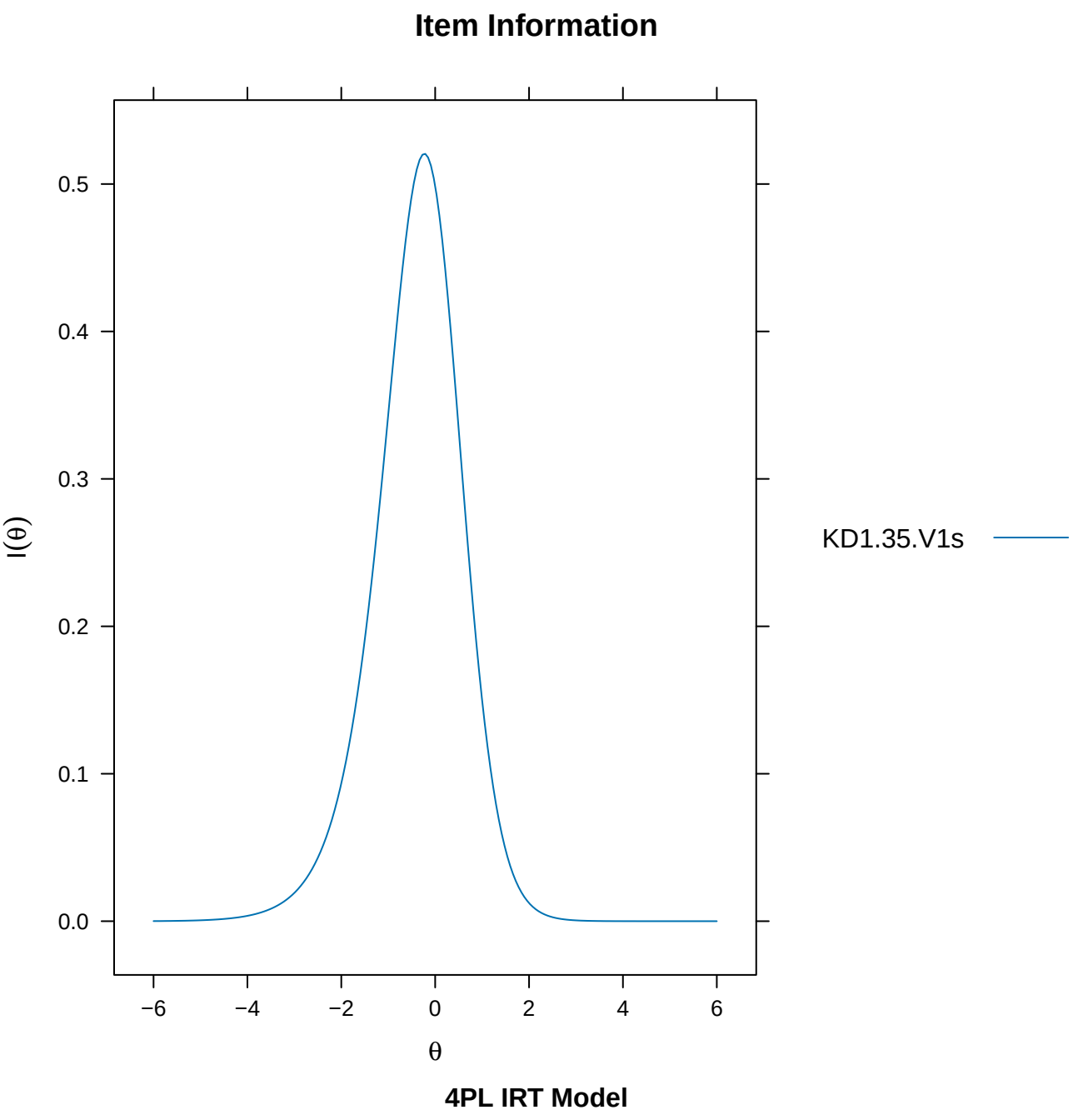

Item Information
I(θ)
θ
4
3
2
1
0
−6
−4
−2
0
2
4
6
KD1.23.V2s
4PL IRT Model

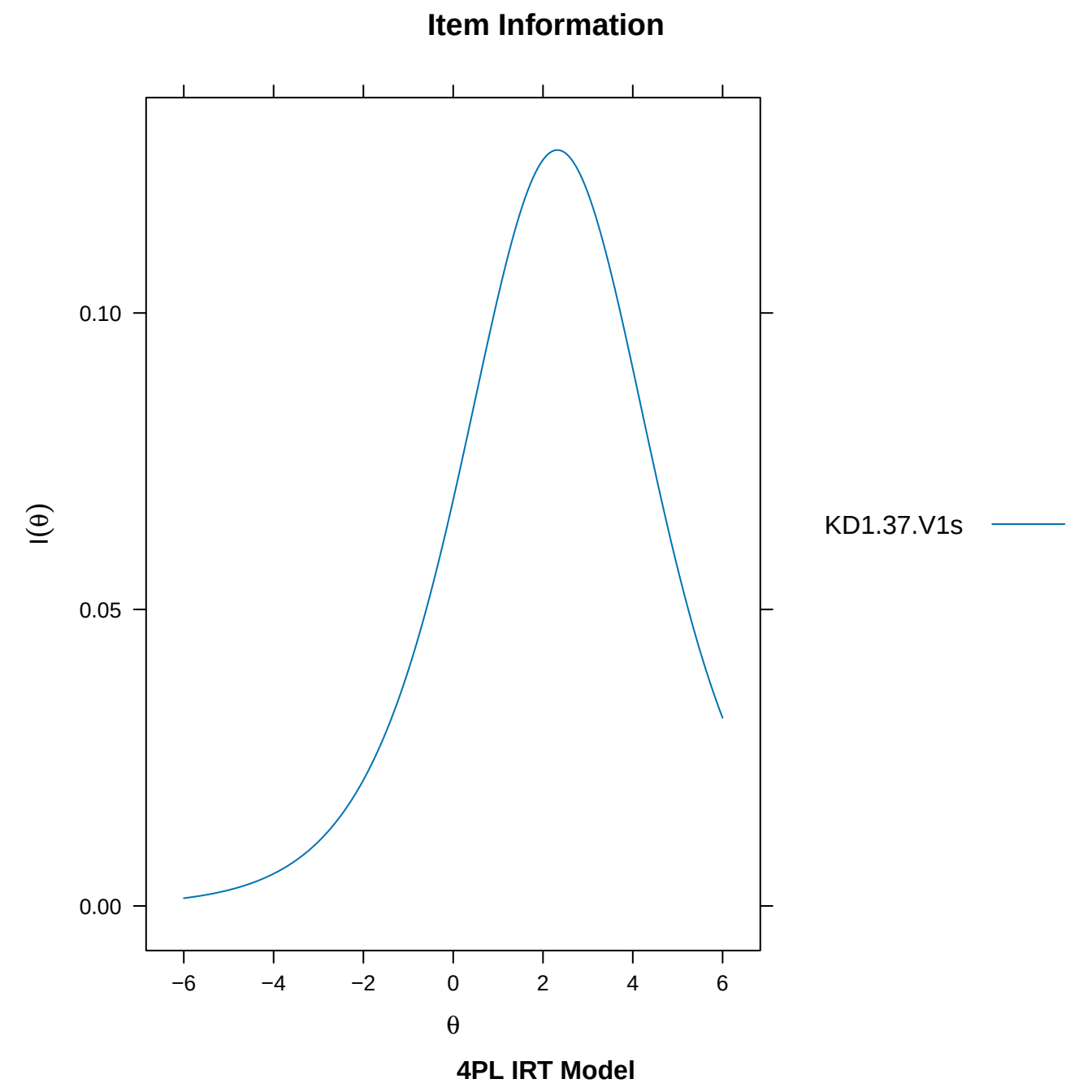

Item Information
I(θ)
2.0
1.5
1.0
0.5
0.0
−6
−4
−2
0
2
4
6
θ
KD1.24.V1s
4PL IRT Model

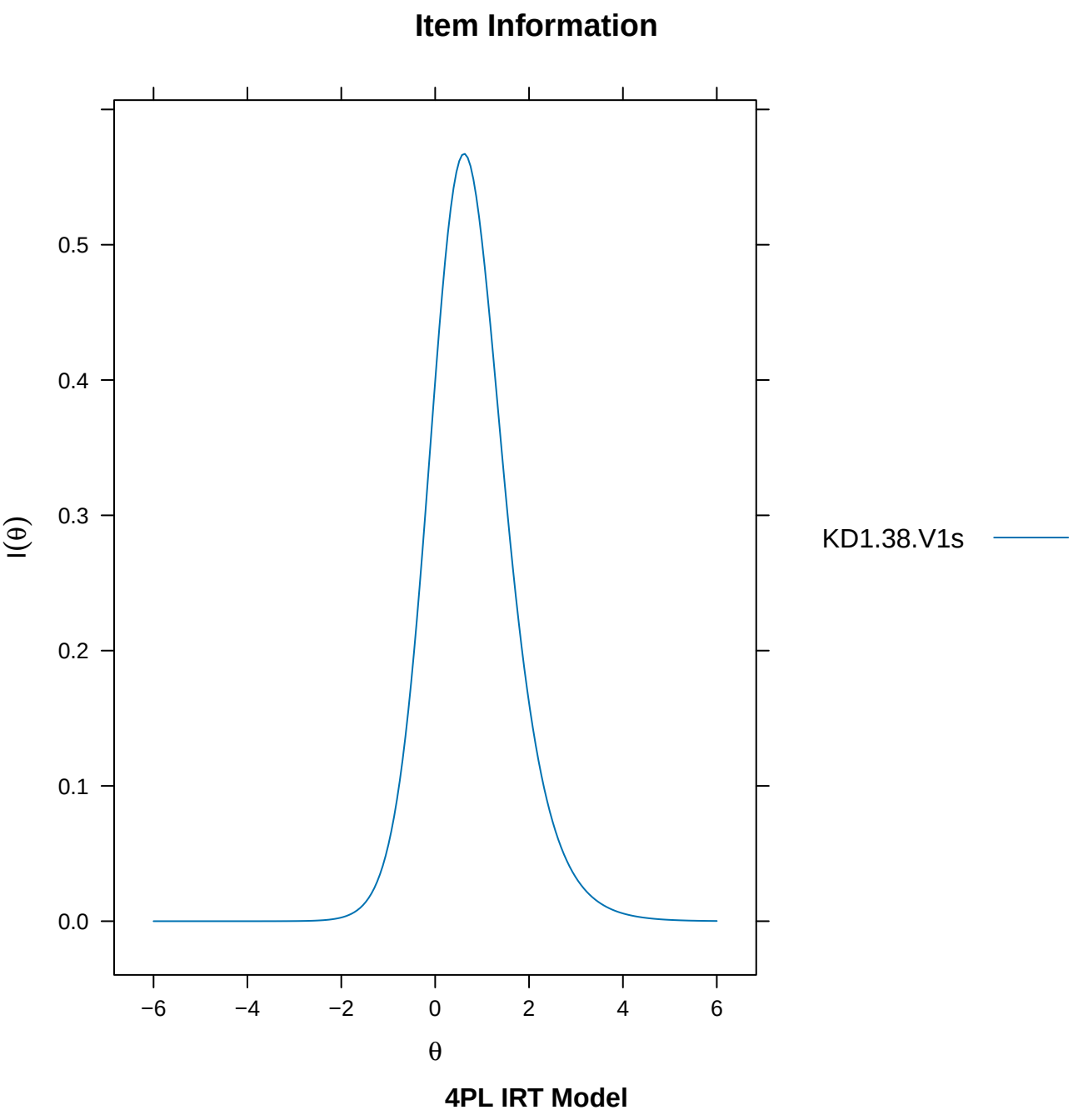

Item Information
2.0
1.5
1.0
0.5
0.0
I(θ)
−6
−4
−2
0
2
4
6
θ
KD1.25.V1s
4PL IRT Model

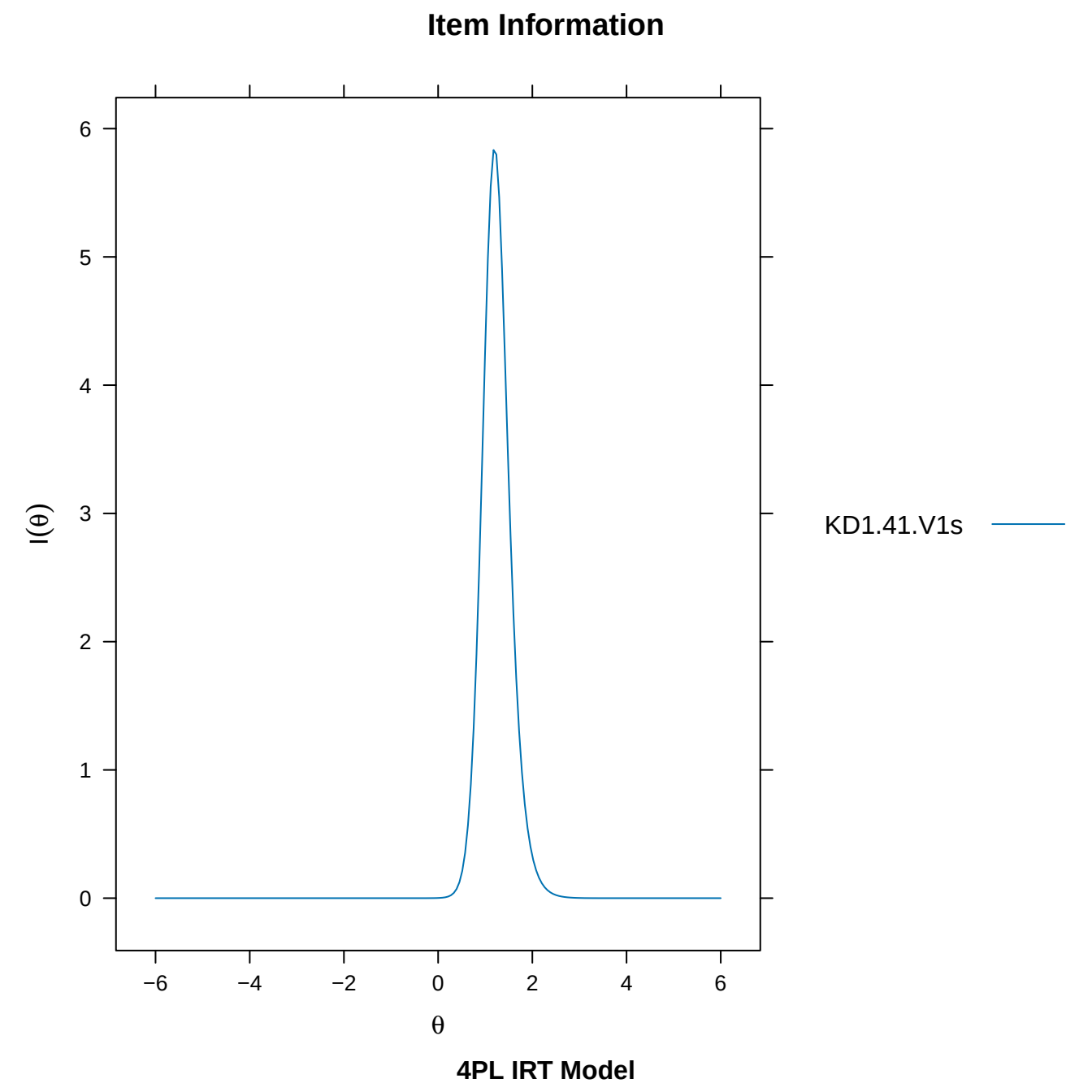

Item Information
I(θ)
2.0
1.5
1.0
0.5
0.0
−6
−4
−2
0
2
4
6
θ
KD1.27.V1s
4PL IRT Model

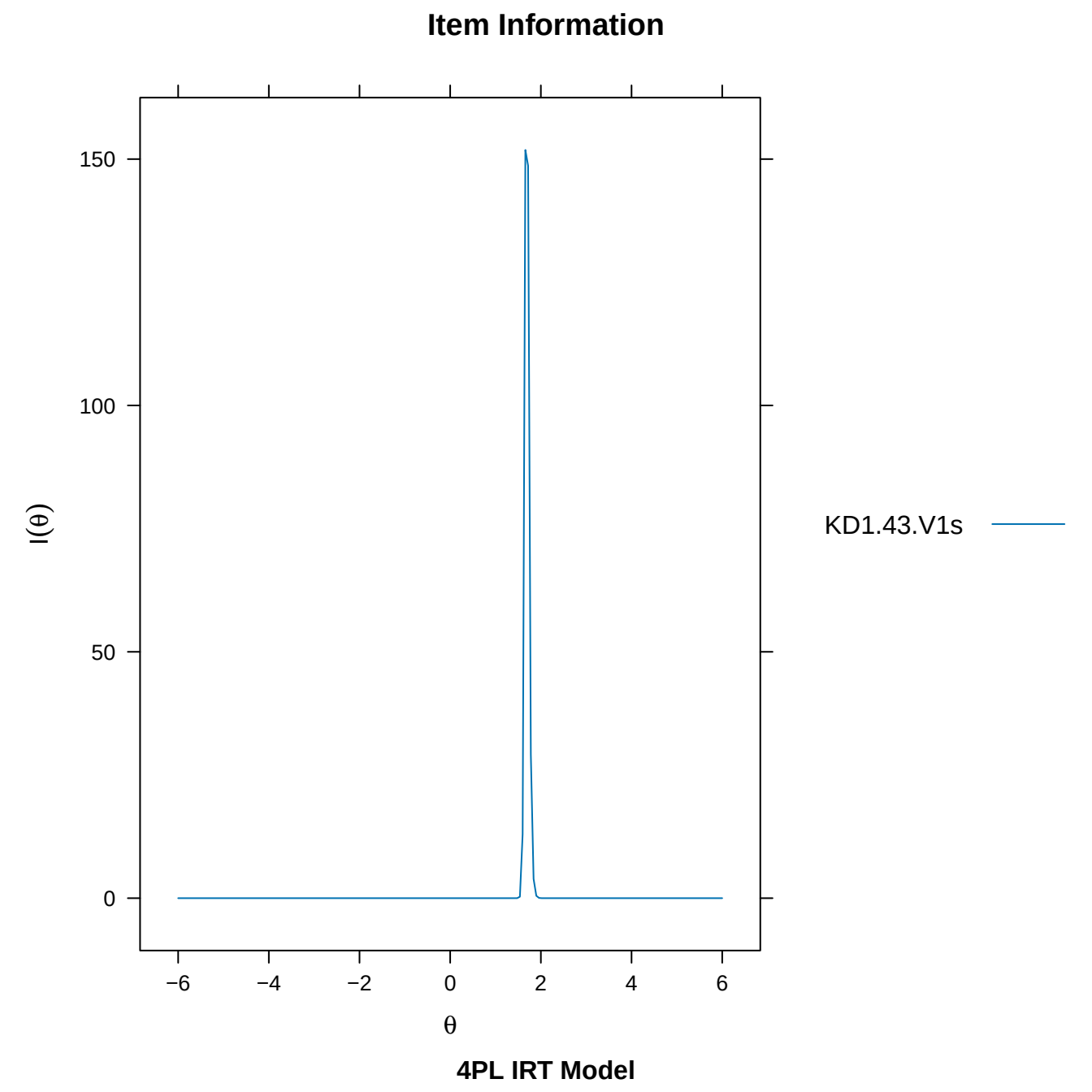

Item Information
I(θ)
θ
0
2
4
6
8
−6
−4
−2
0
2
4
6
KD1.28.V1s
4PL IRT Model

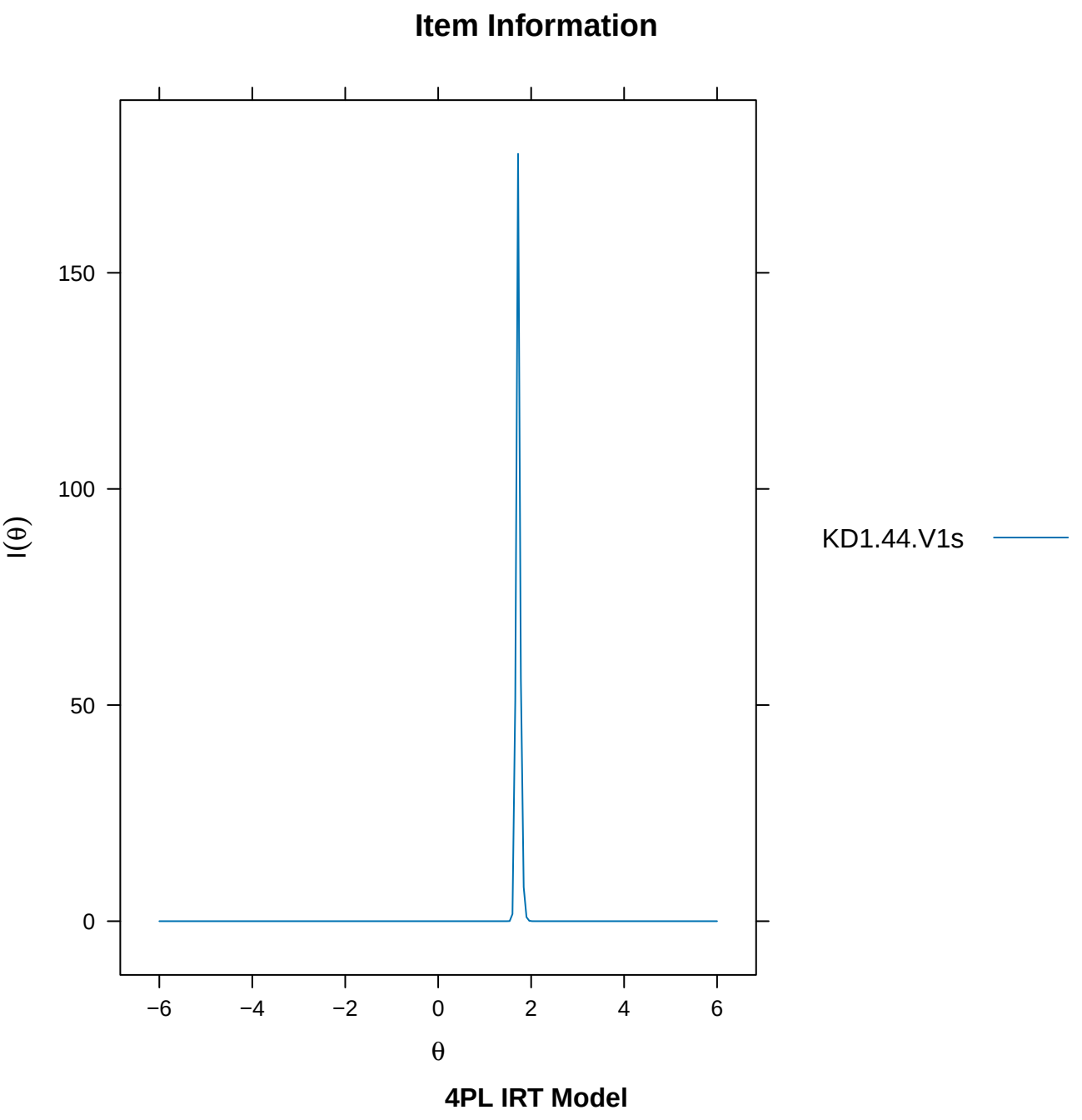

Item Information
0.5
0.4
0.3
0.2
0.1
0.0
I(θ)
−6
−4
−2
0
2
4
6
θ
KD1.35.V1s
4PL IRT Model

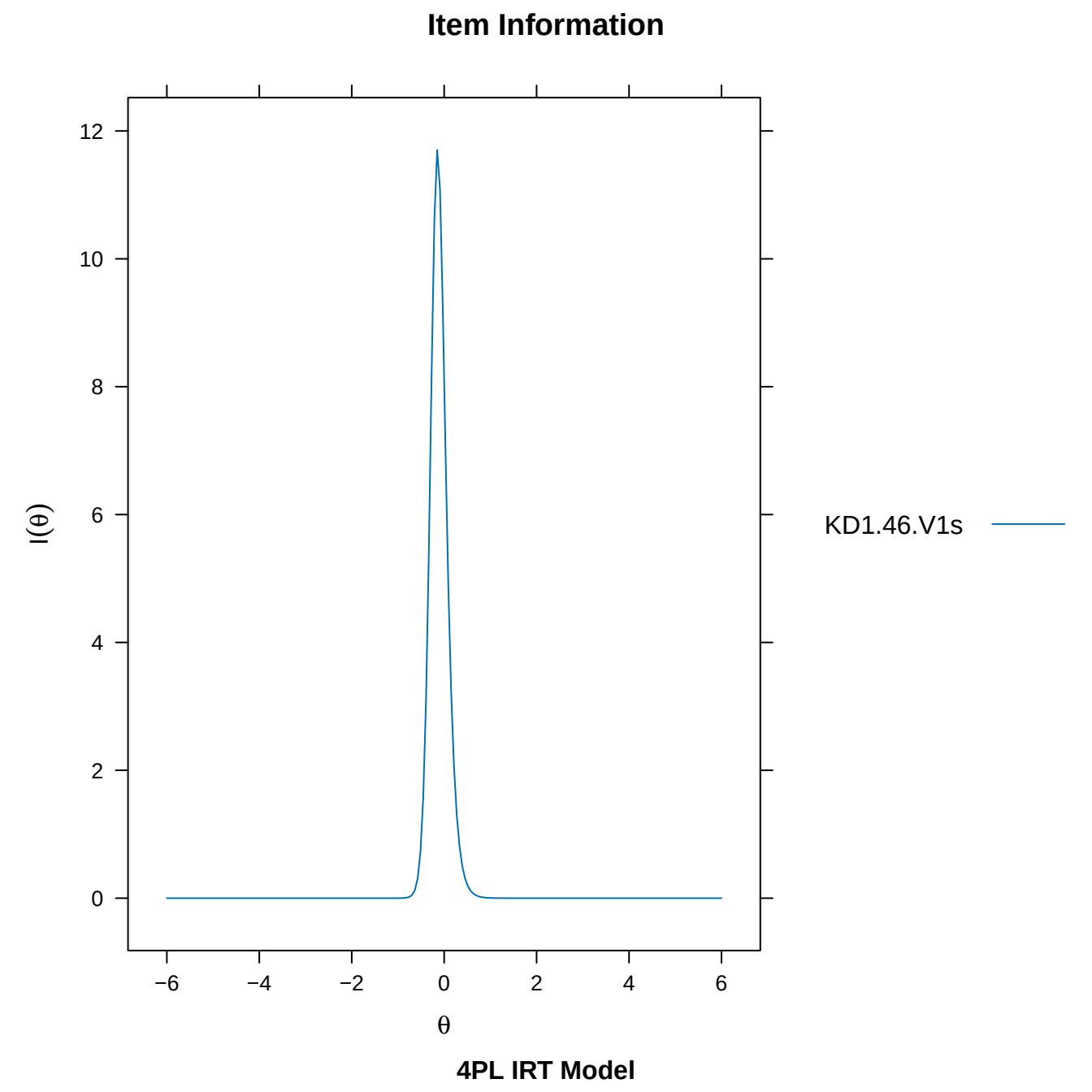

Item Information
0.10
0.05
0.00
I(θ)
−6
−4
−2
0
2
4
6
θ
KD1.37.V1s
4PL IRT Model

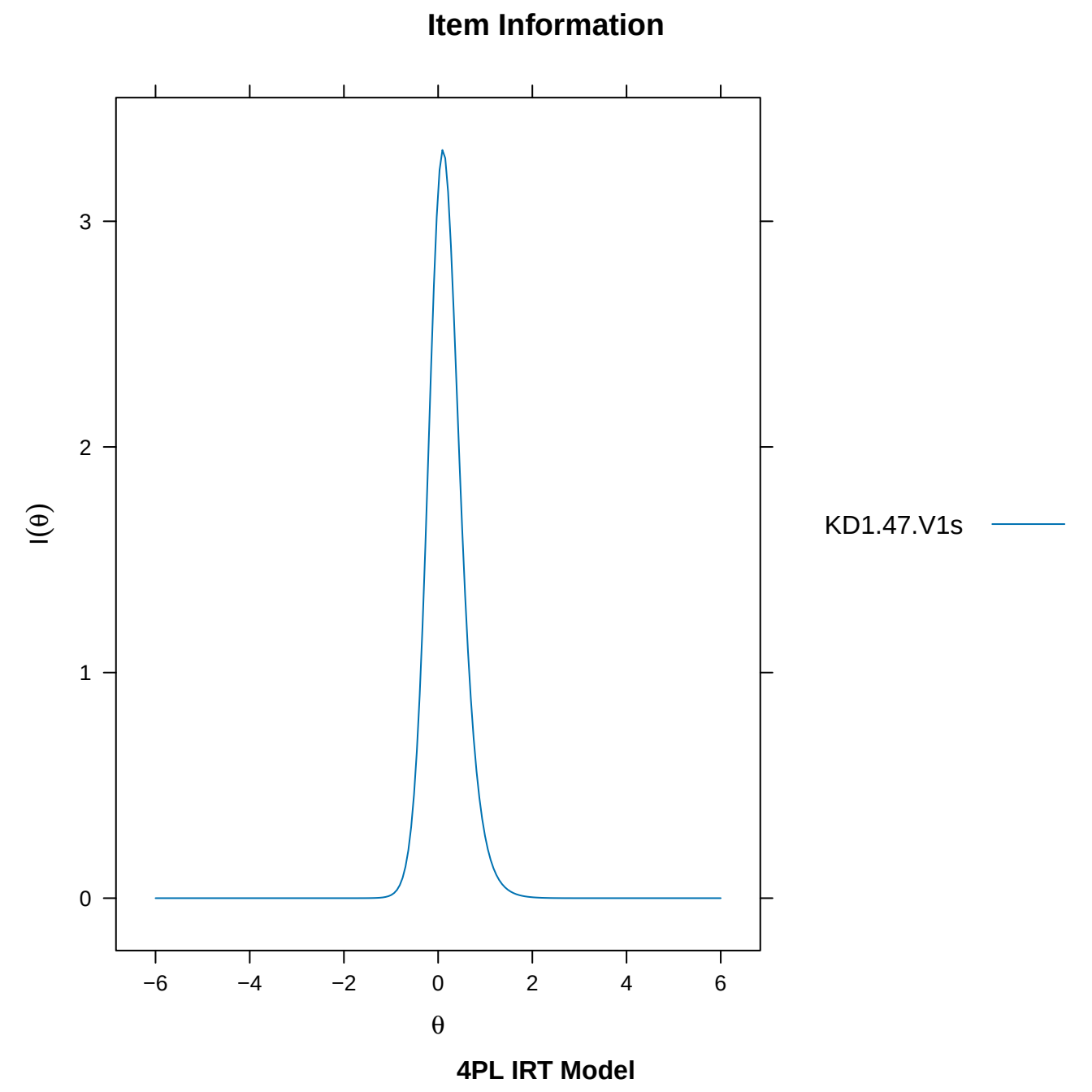

Item Information
I(θ)
0.0
0.1
0.2
0.3
0.4
0.5
−6
−4
−2
0
2
4
6
θ
KD1.38.V1s
4PL IRT Model

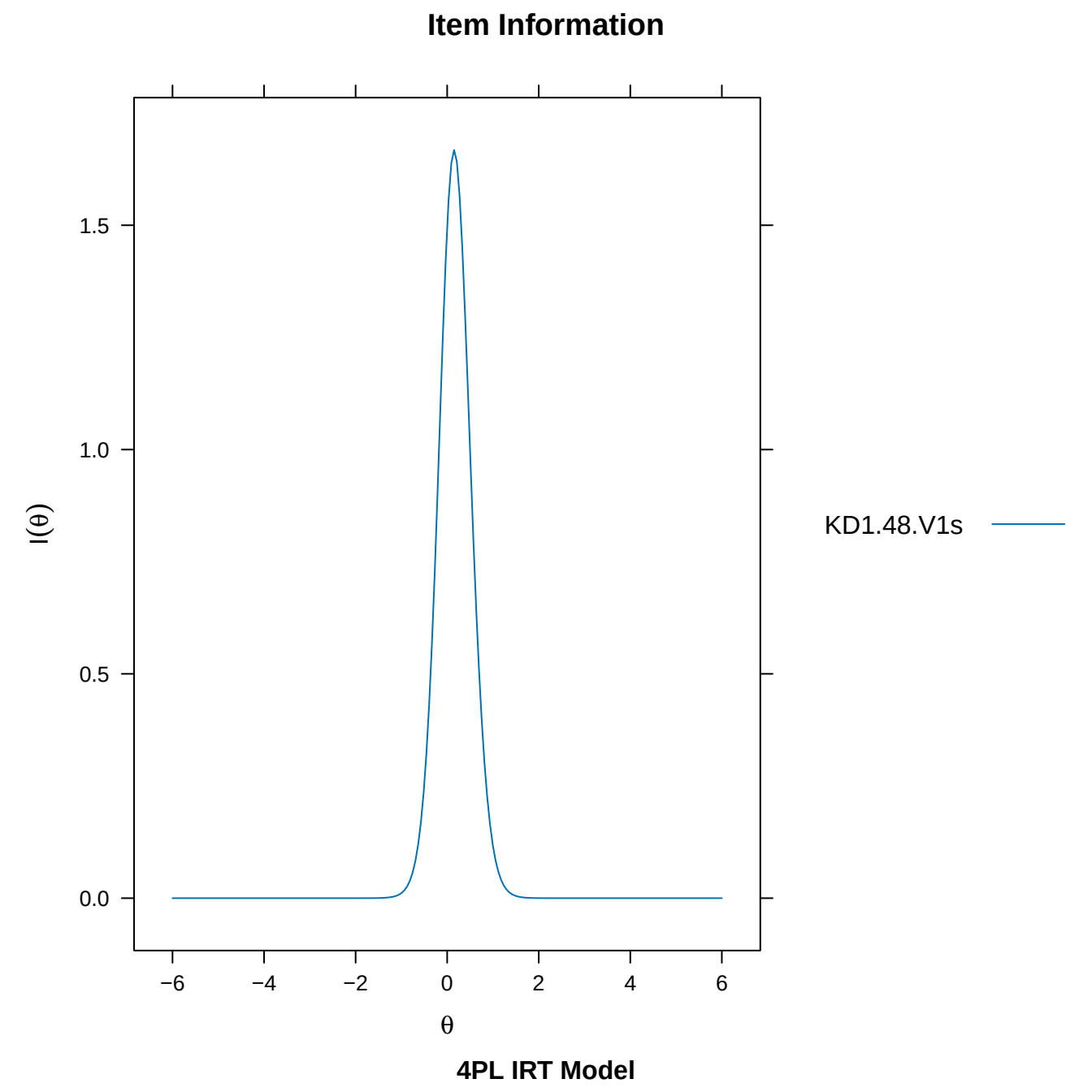

Item Information
I(θ)
θ
6
5
4
3
2
1
0
−6
−4
−2
0
2
4
6
KD1.41.V1s
4PL IRT Model

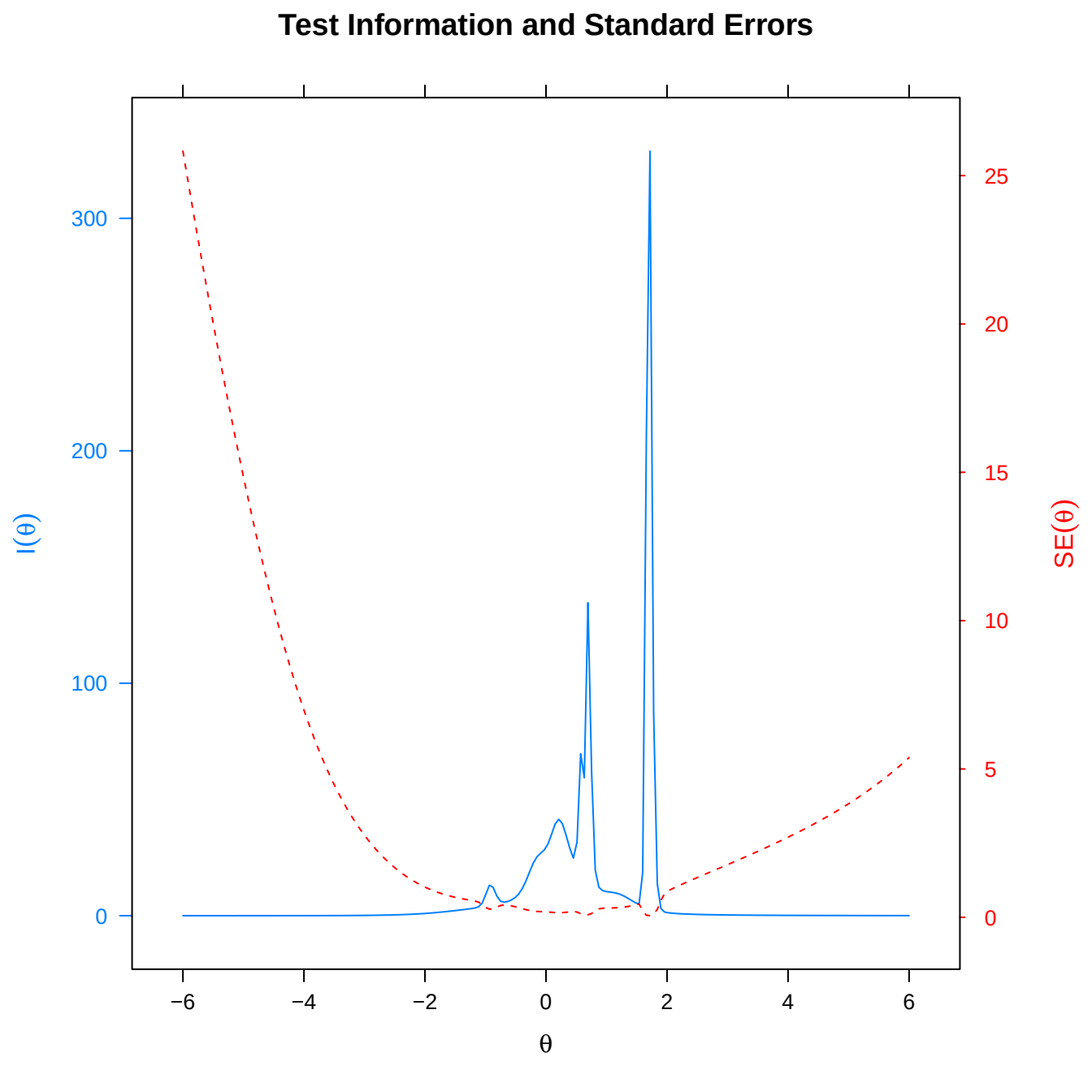

Item Information
150
100
50
0
I(θ)
−6
−4
−2
0
2
4
6
θ
KD1.43.V1s
4PL IRT Model


Item Information
150
100
50
0
I(θ)
−6
−4
−2
0
2
4
6
θ
KD1.44.V1s
4PL IRT Model


Item Information
12
10
8
6
4
2
0
I(θ)
−6
−4
−2
0
2
4
6
θ
KD1.46.V1s
4PL IRT Model


Item Information
I(θ)
3
2
1
0
−6
−4
−2
0
2
4
6
θ
KD1.47.V1s
4PL IRT Model


Item Information
1.5
1.0
0.5
0.0
I(θ)
−6
−4
−2
0
2
4
6
θ
KD1.48.V1s
4PL IRT Model


Test Information and Standard Errors
I(θ)
SE(θ)
θ
300
200
100
0
25
20
15
10
5
0
−6
−4
−2
0
2
4
6