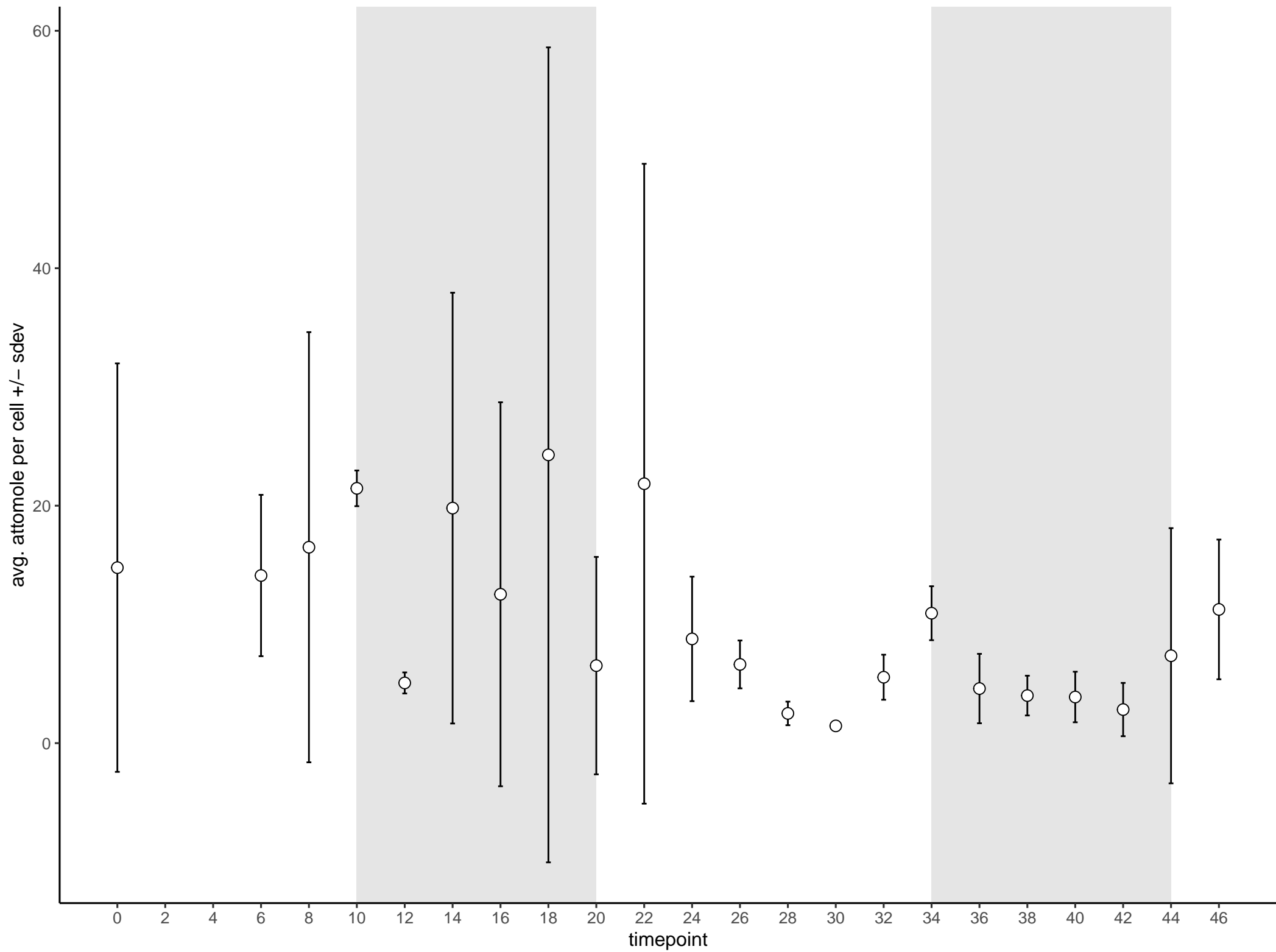
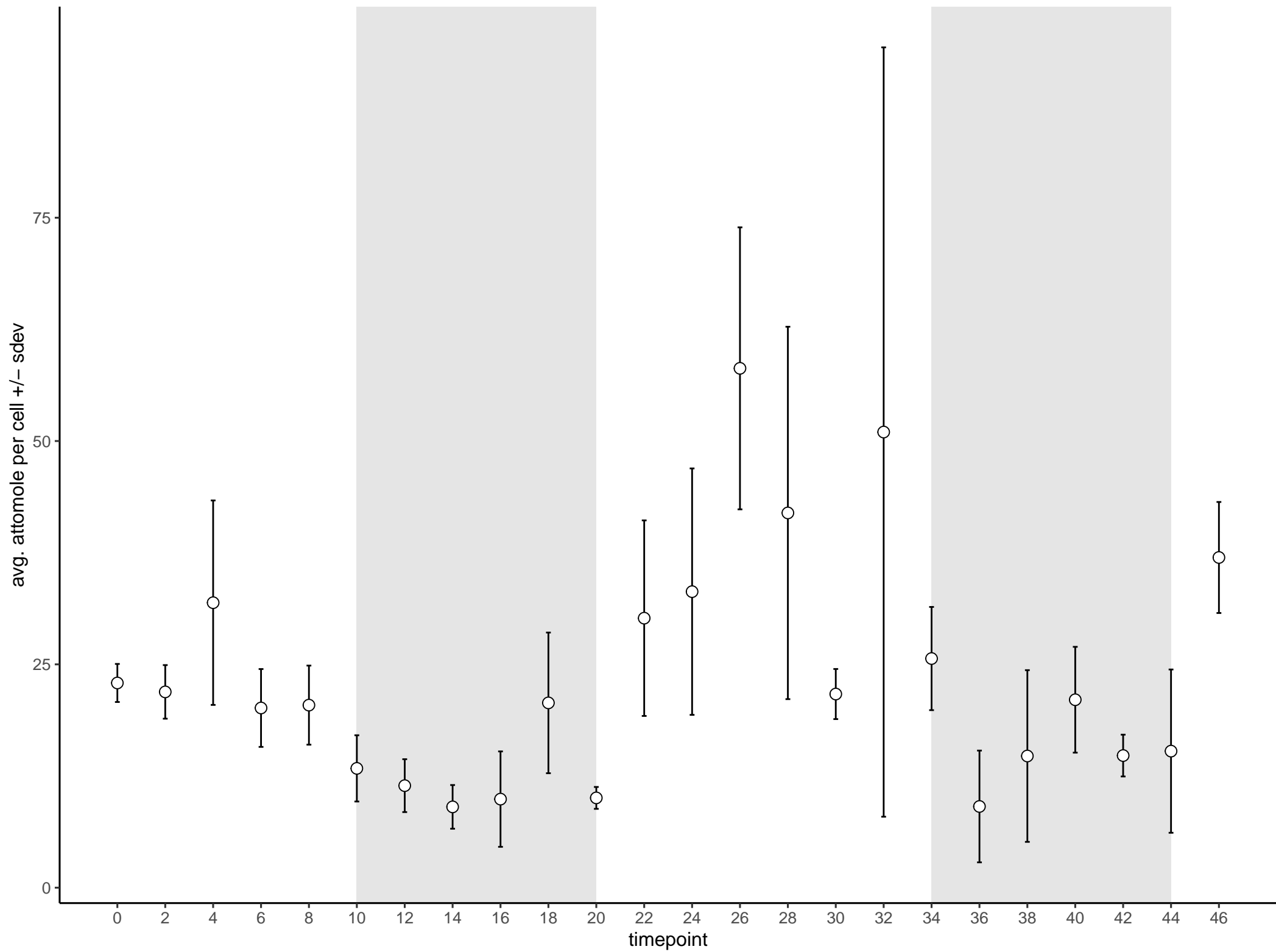


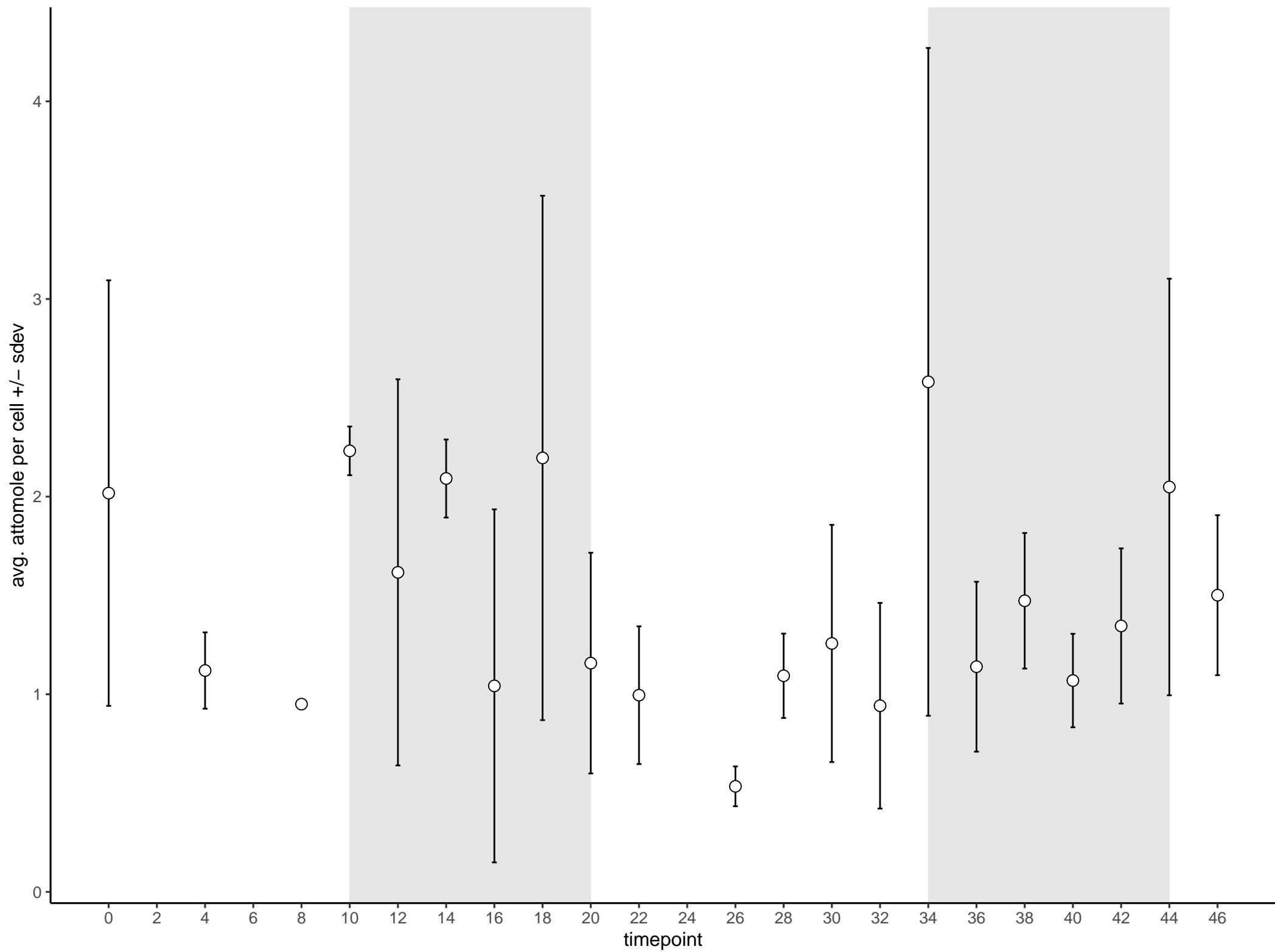
glutamine



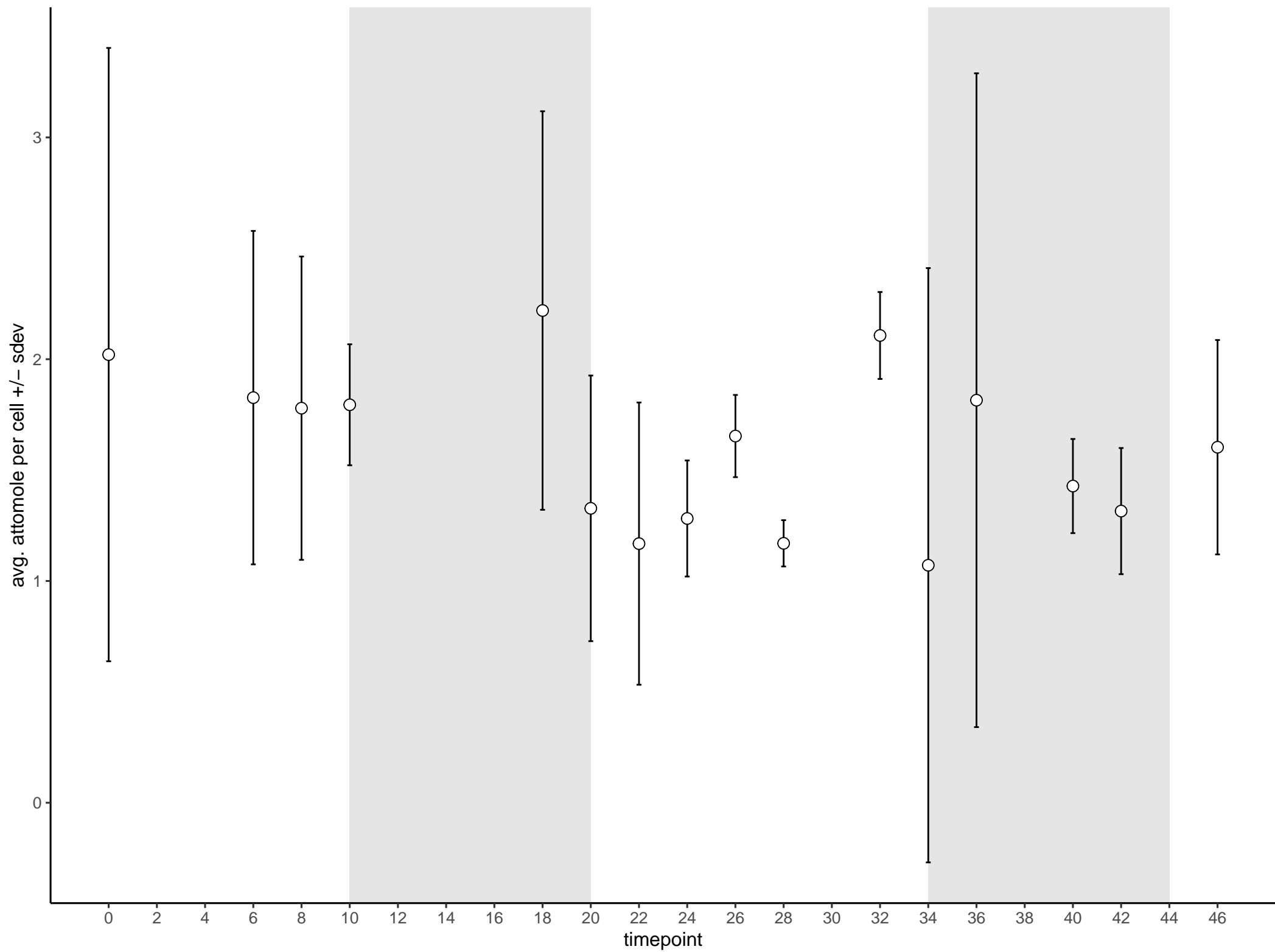
adenosine 5'-monophosphate pos



3-methyl-2-oxobutanoic acid



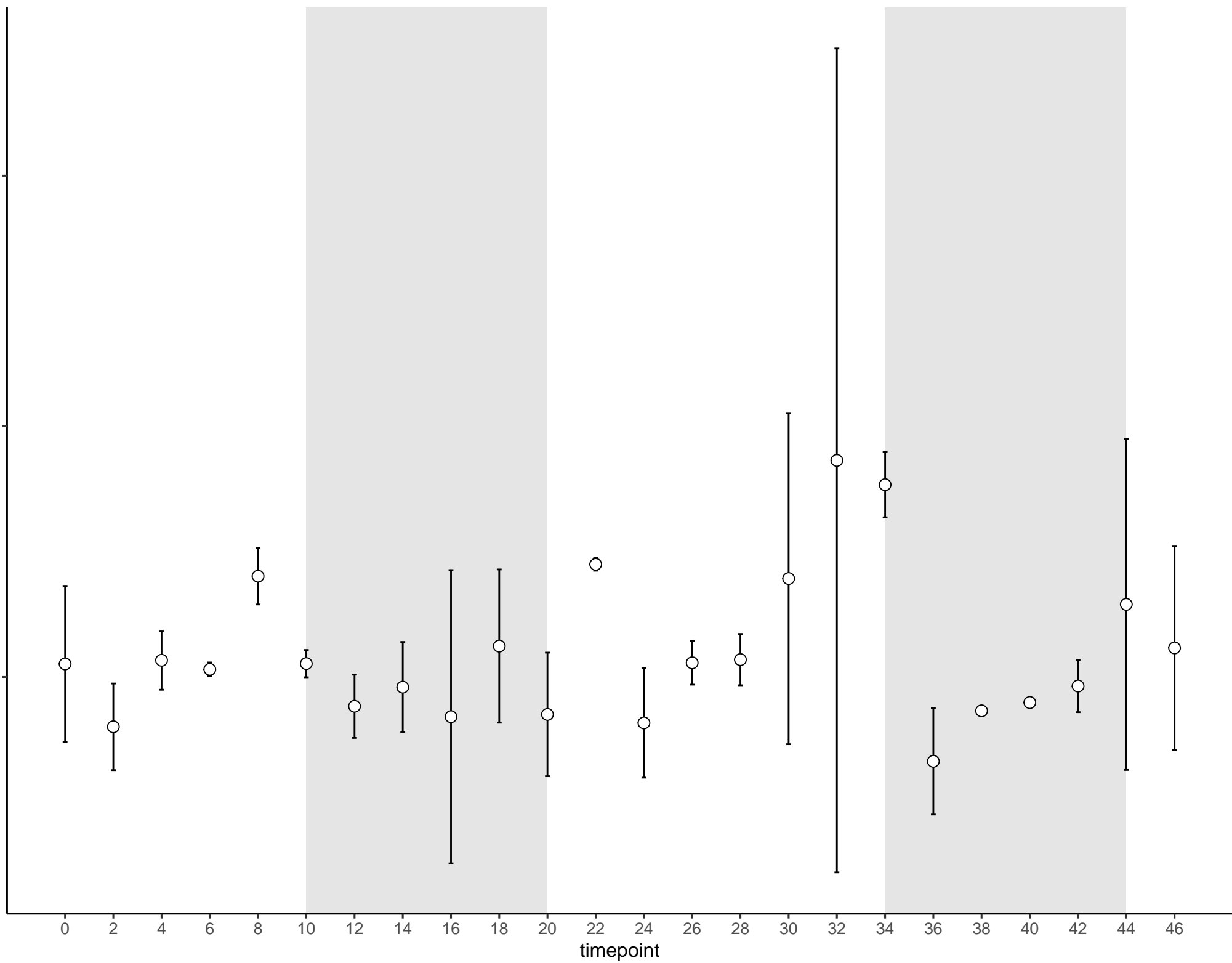
guanine



guanosine pos

avg. attomole per cell \pm sdev

timepoint



glutathione oxidized

avg. attomole per cell \pm sdev

600

400

200

0

timepoint

0

2

4

6

8

10

12

14

16

18

20

22

24

26

28

30

32

34

36

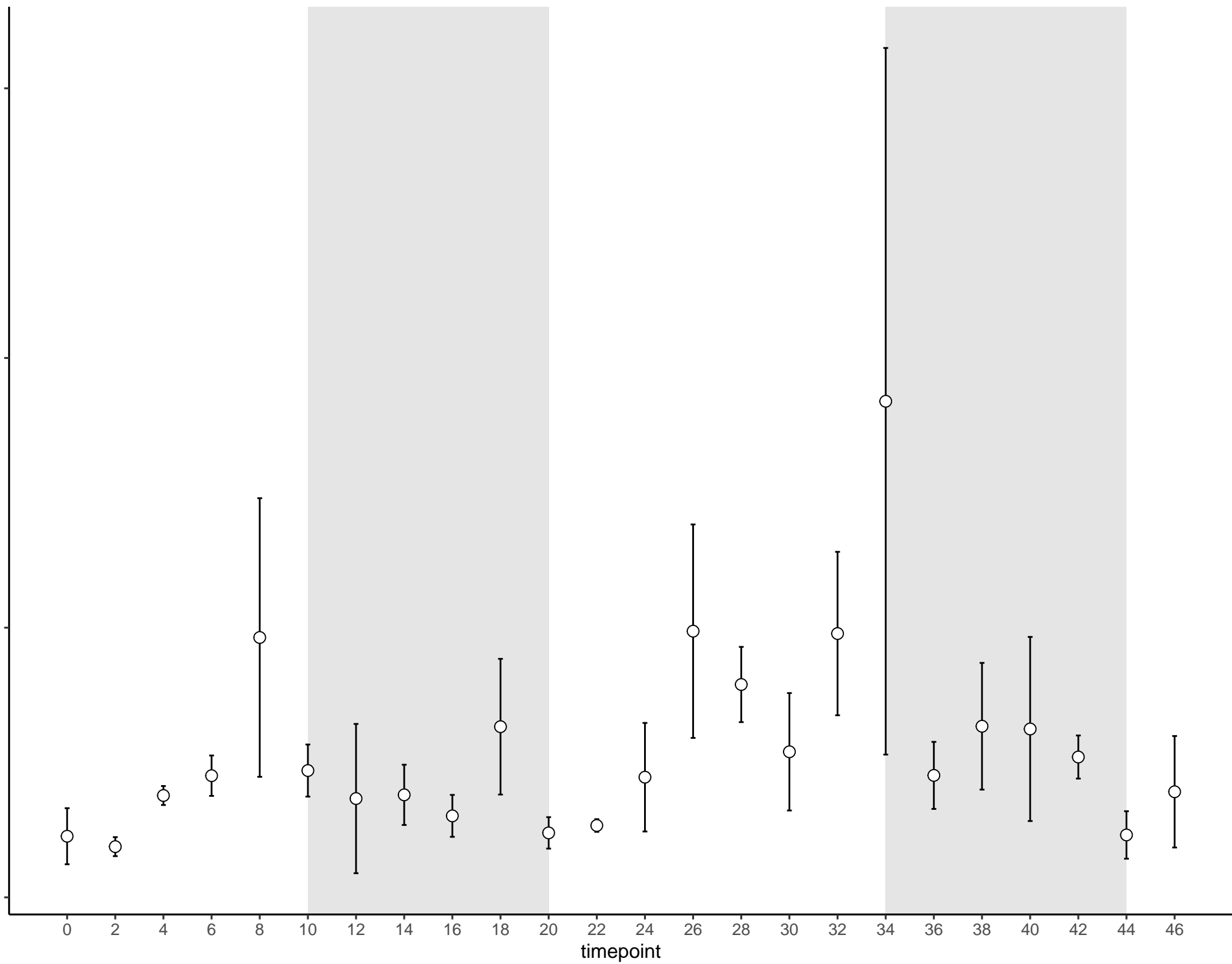
38

40

42

44

46



glutathione pos

avg. attomole per cell \pm sdev

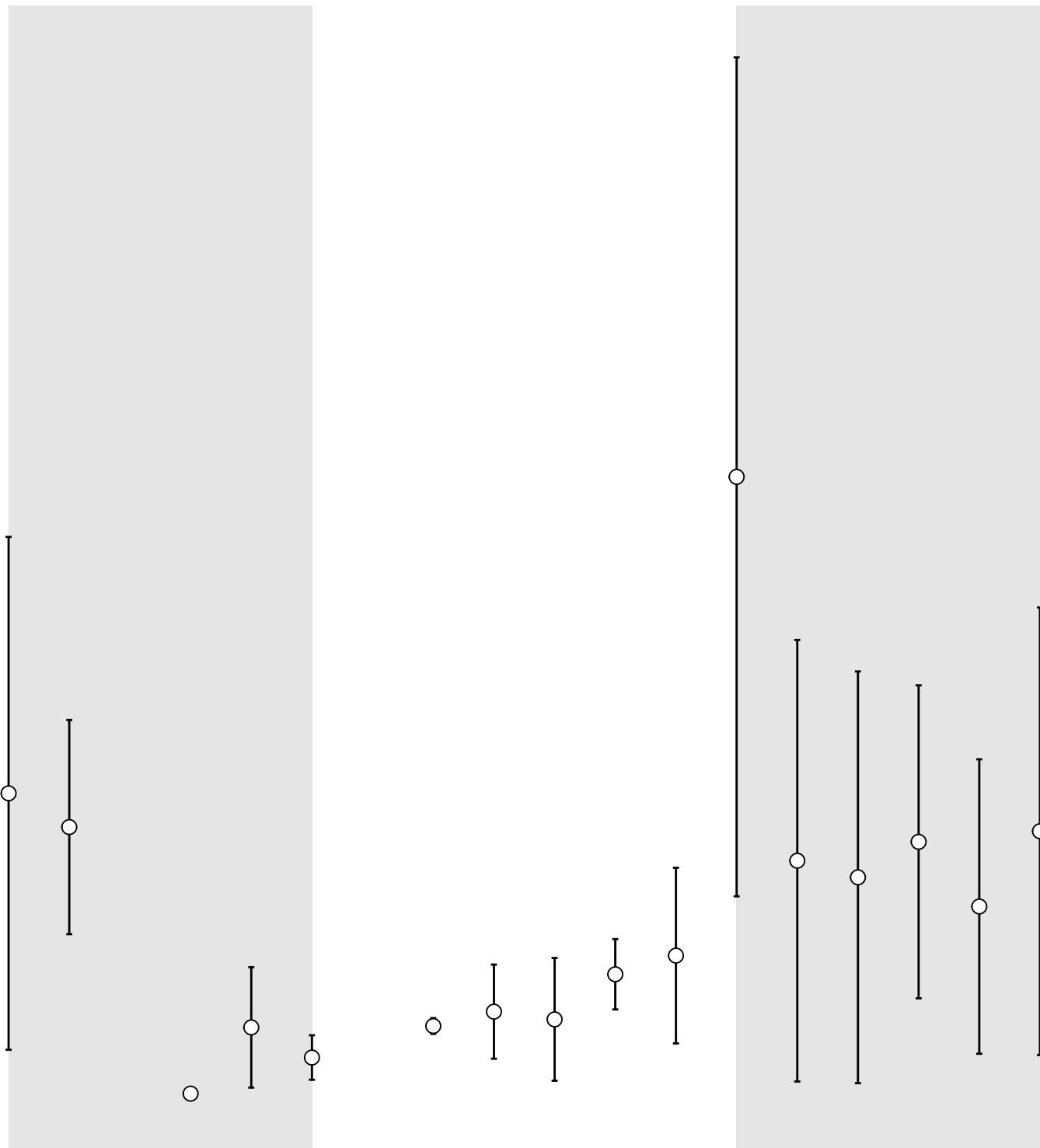
100

50

0

timepoint

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46



n-acetylglutamic acid

avg. attomole per cell \pm sdev

timepoint

300

200

100

0

2

4

6

8

10

12

14

16

18

20

22

24

26

28

30

32

34

36

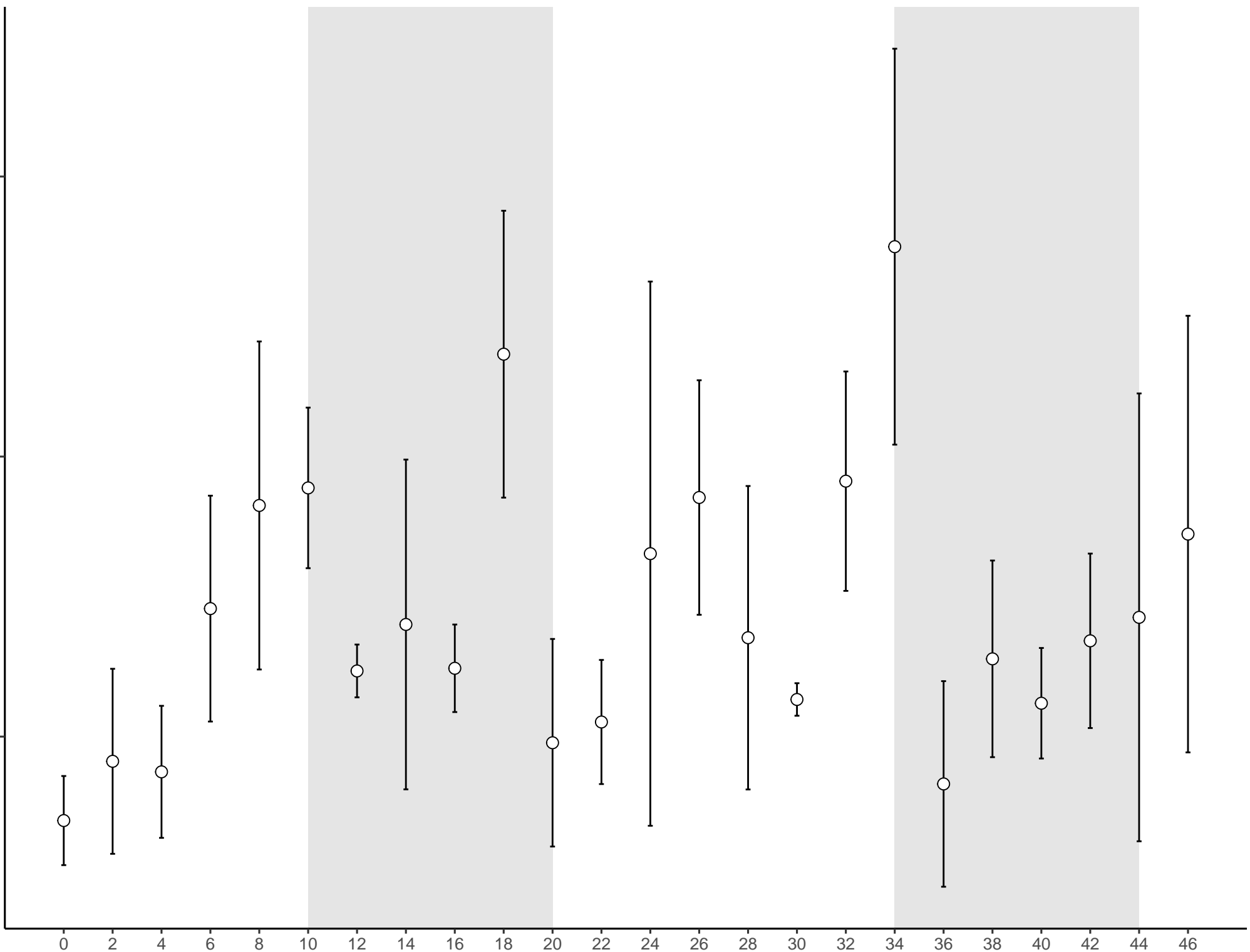
38

40

42

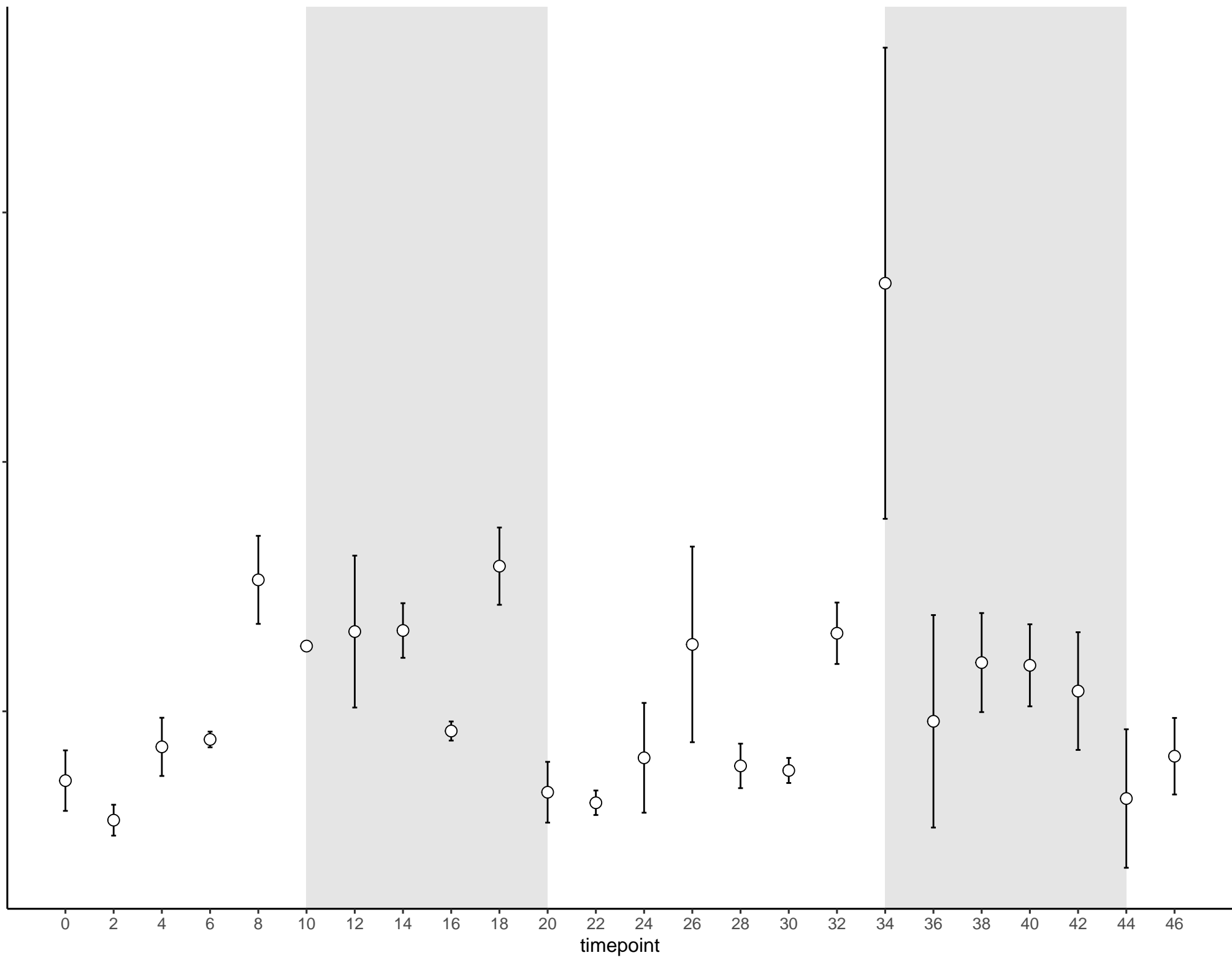
44

46

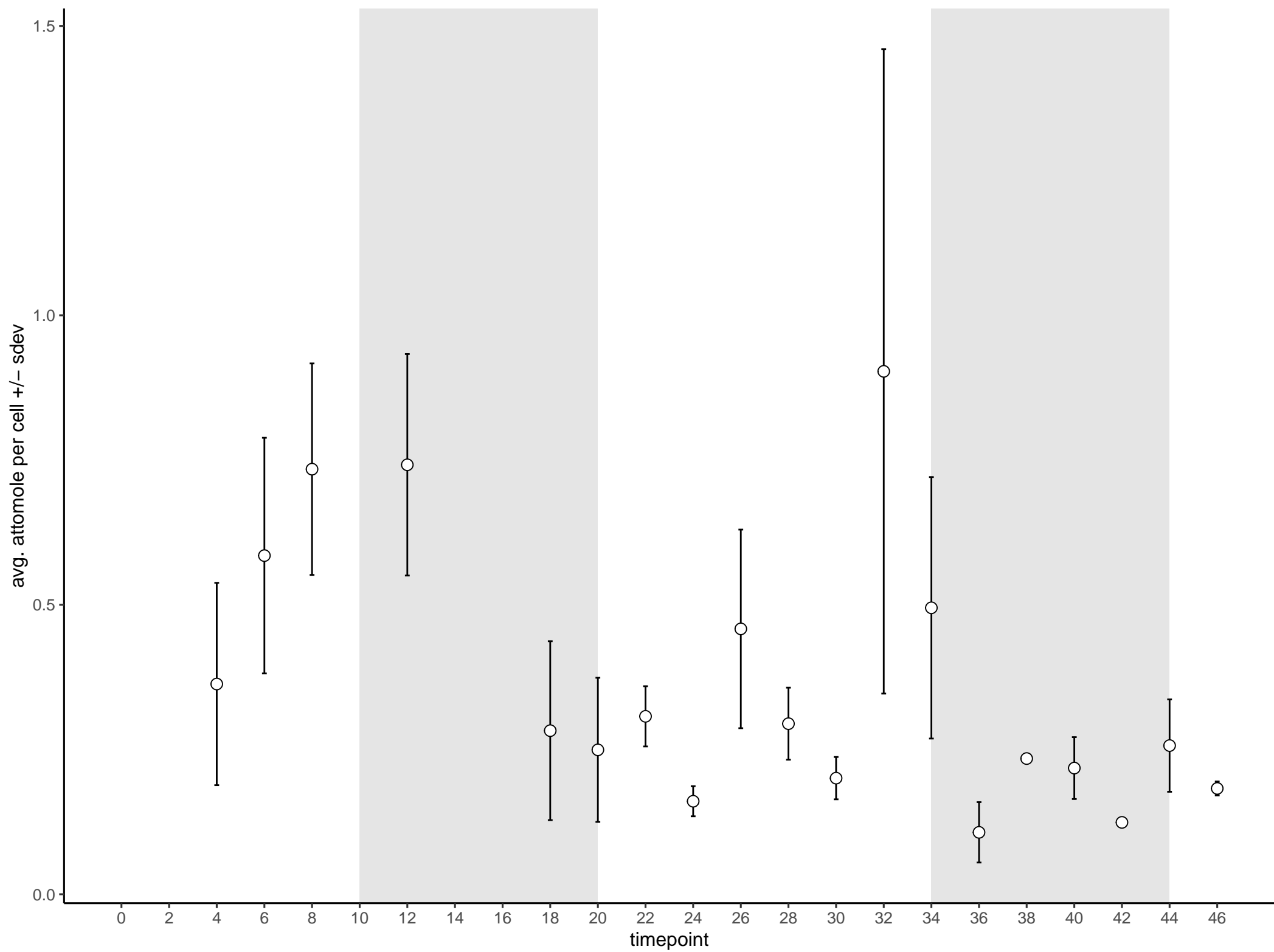


NAD

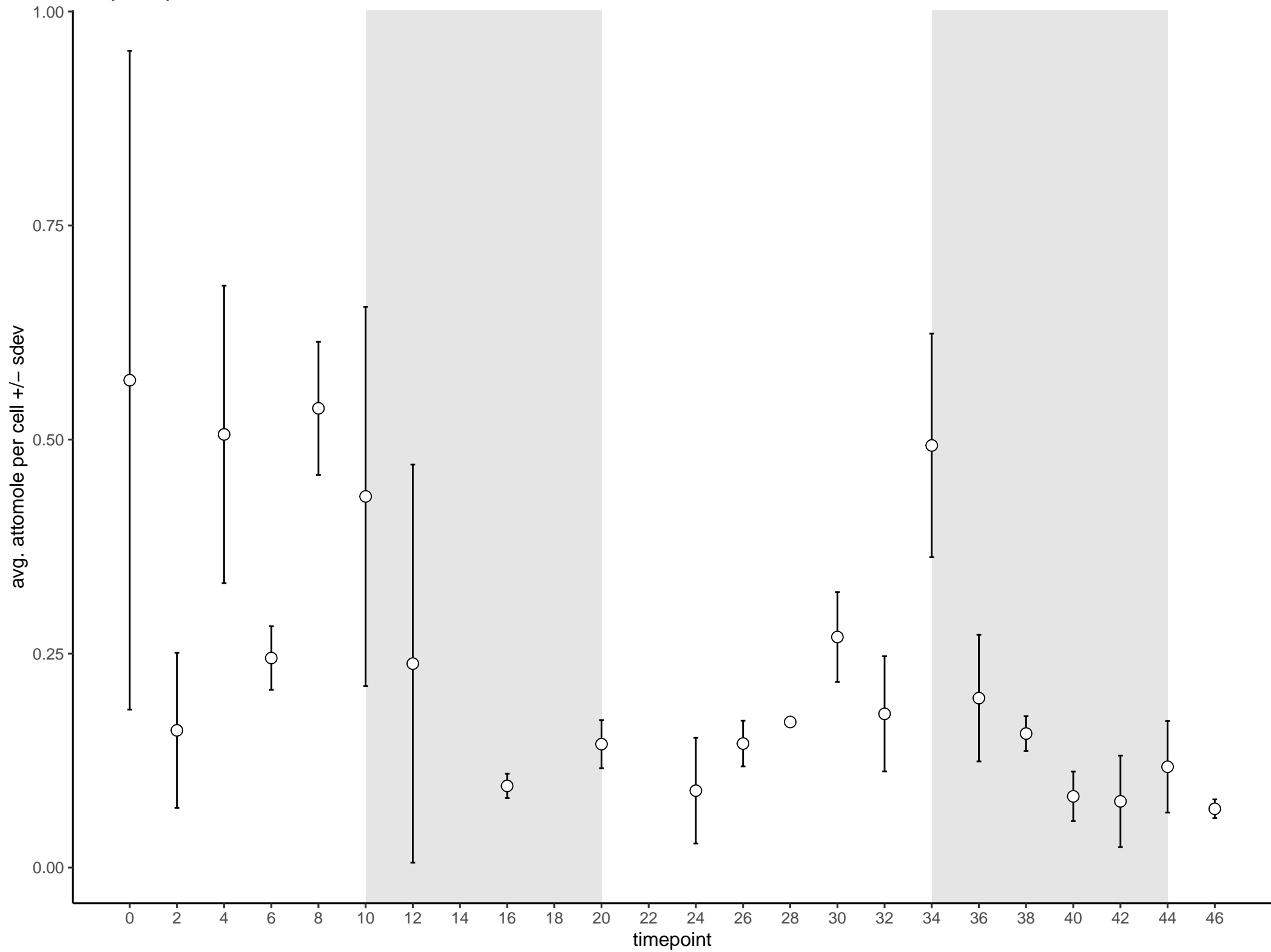
avg. attomole per cell \pm sdev

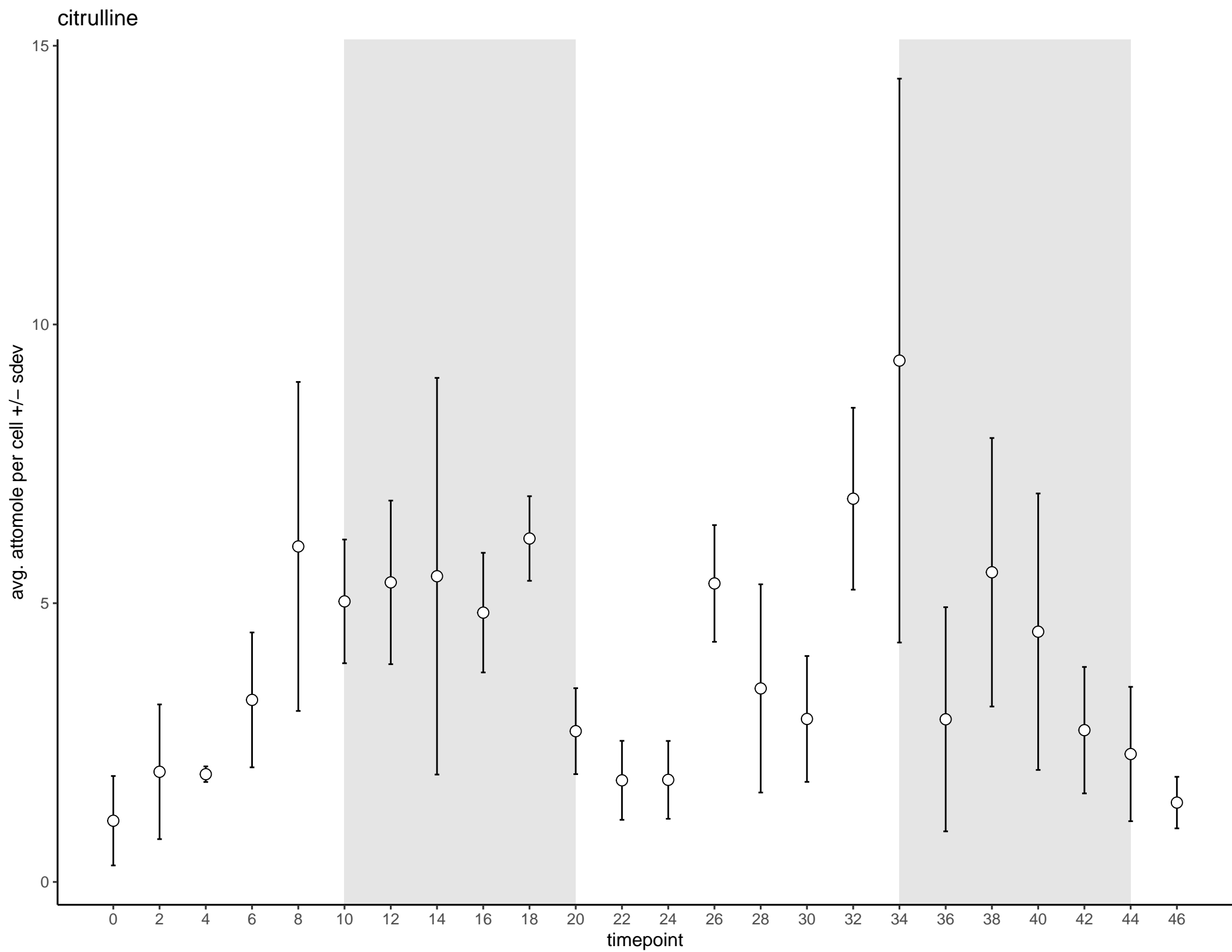


hexose-6-phosphate



4-hydroxybenzoic acid





cytidine pos

avg. attomole per cell \pm sdev

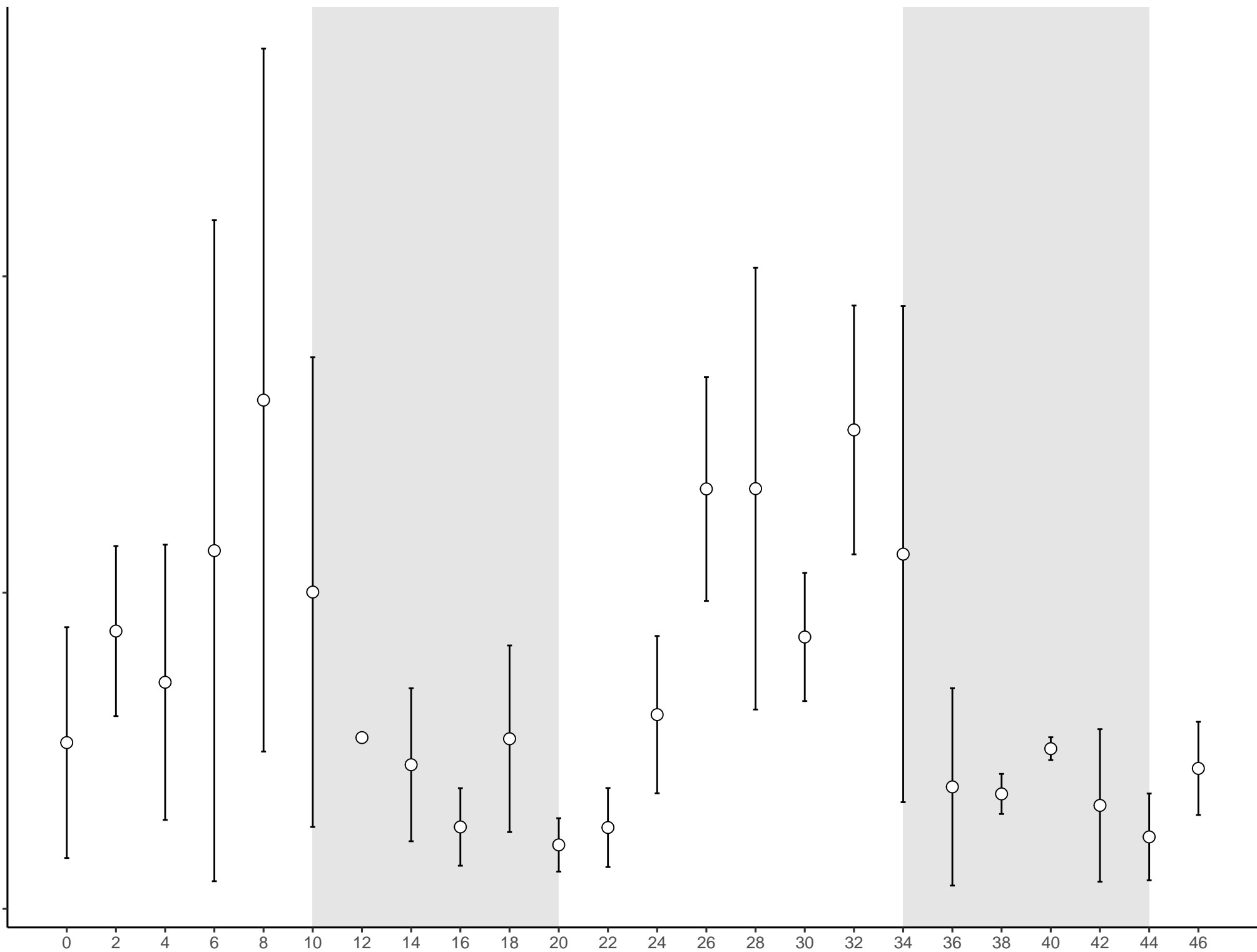
10

5

0

timepoint

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46



cytosine

avg. attomole per cell \pm sdev

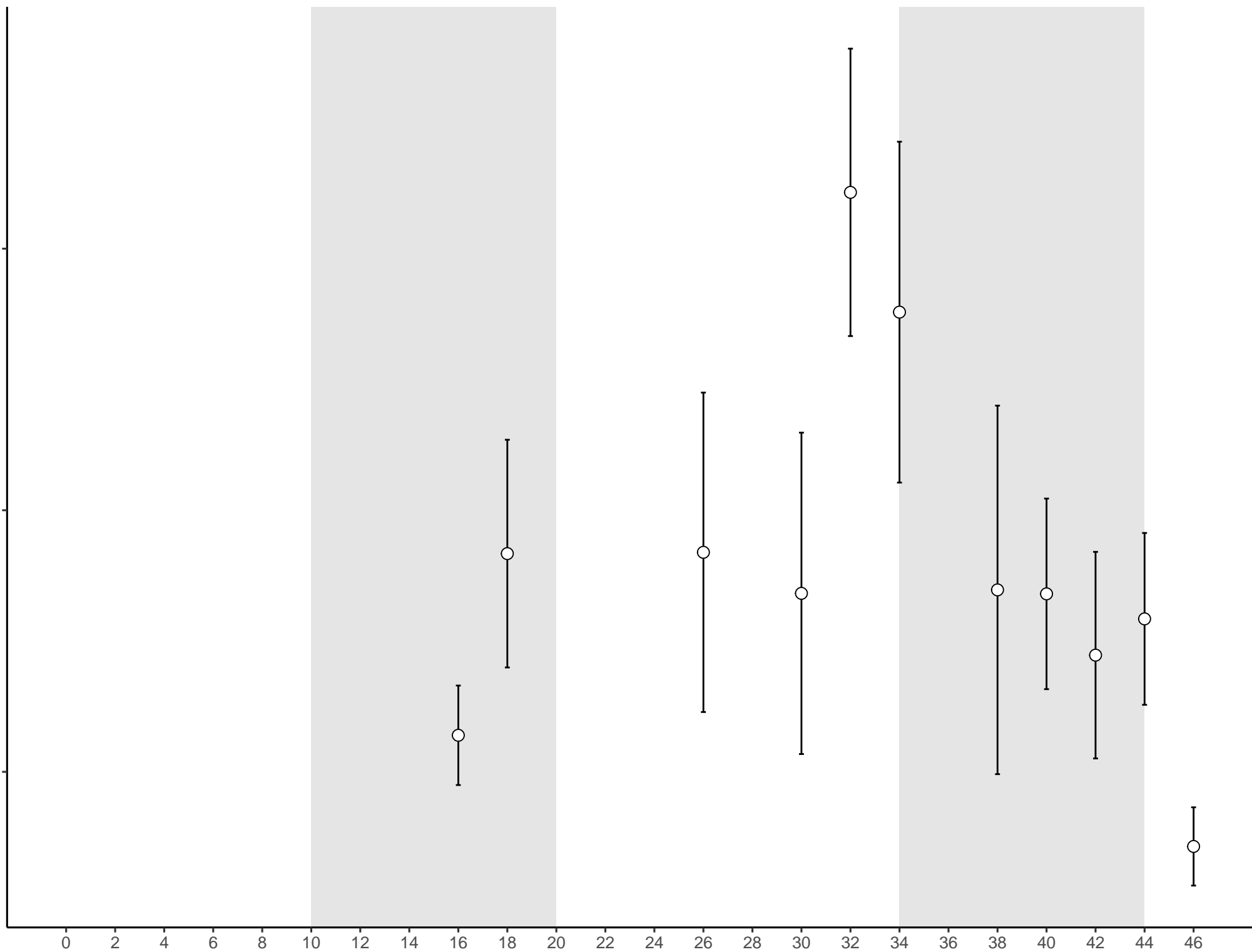
0.6

0.4

0.2

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46

timepoint



desthiobiotin

avg. attomole per cell \pm sdev

0.3

0.2

0.1

timepoint

0

2

4

6

8

10

12

14

16

18

20

22

24

26

28

30

32

34

36

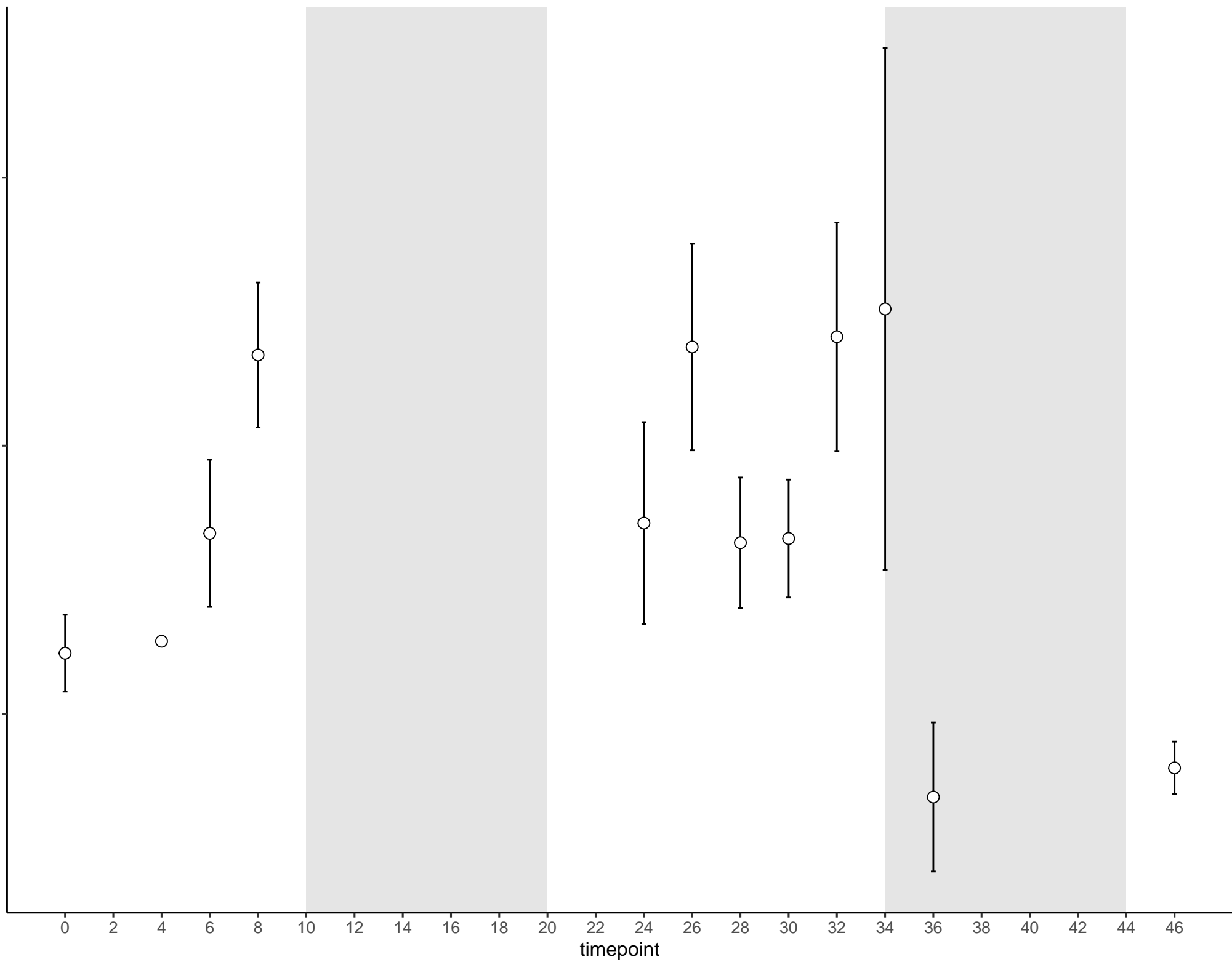
38

40

42

44

46



spermidine

avg. attomole per cell \pm sdev

120

90

60

30

0

0

2

4

6

8

10

12

14

16

18

20

22

24

26

28

30

32

34

36

38

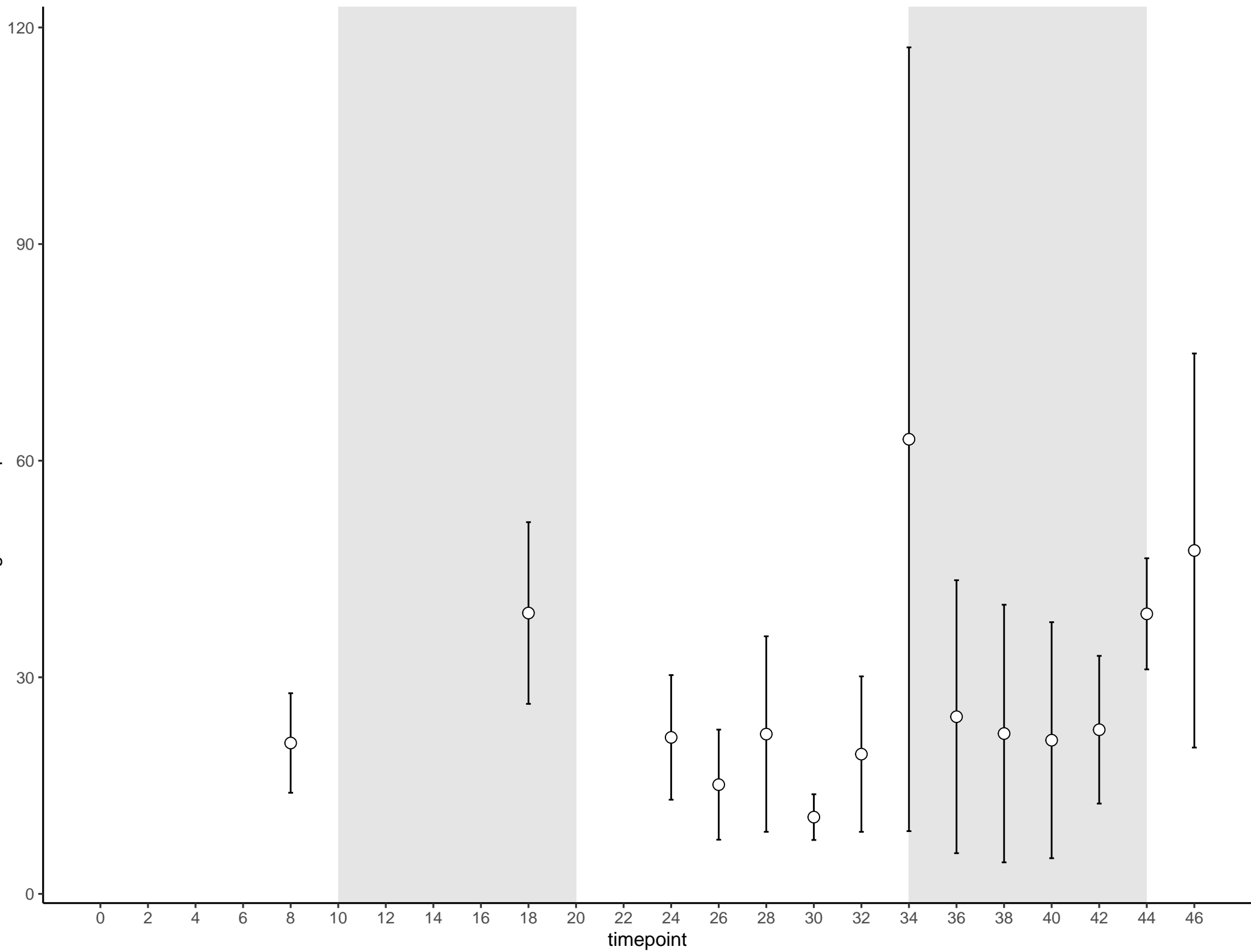
40

42

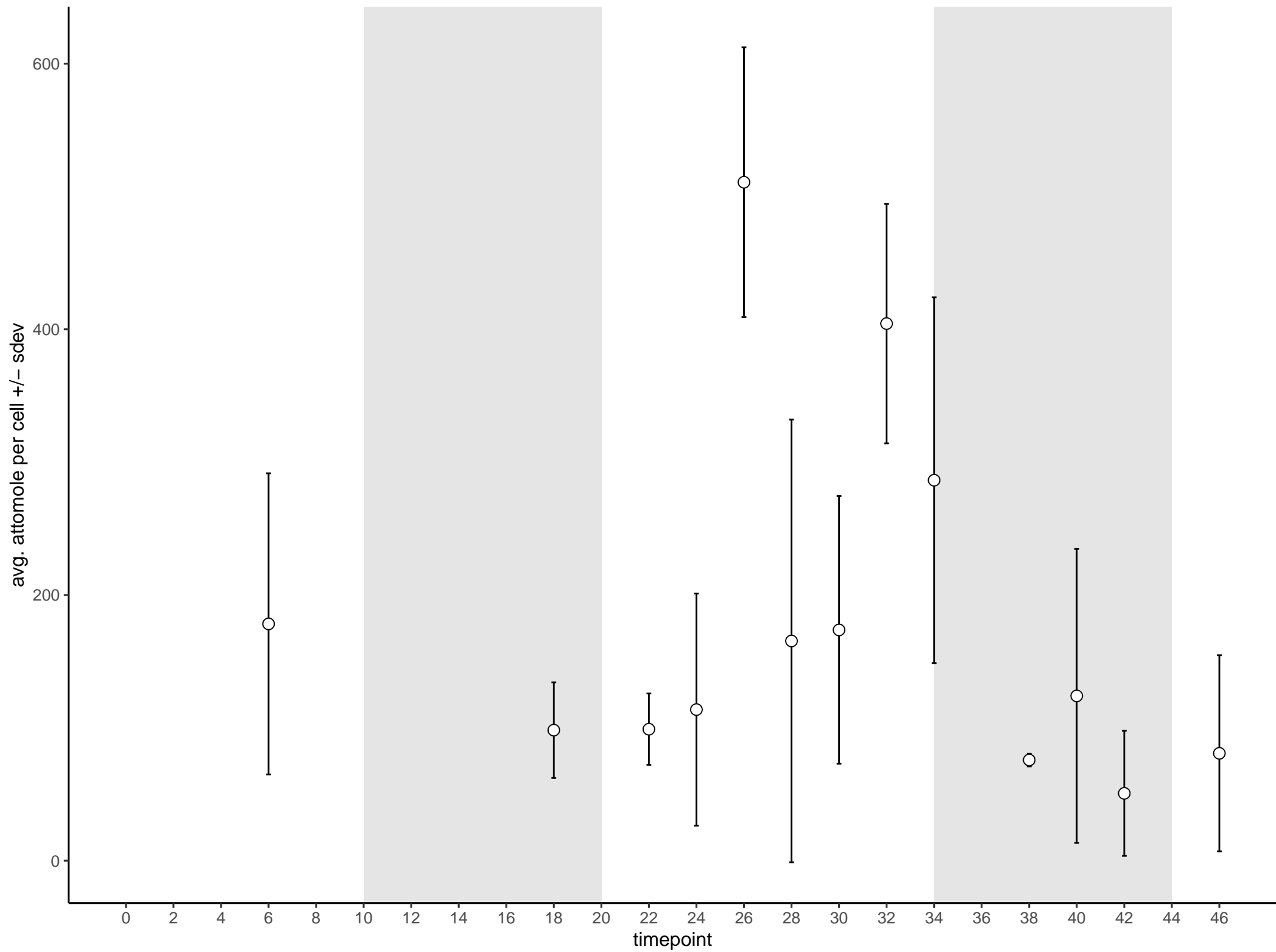
44

46

timepoint



threonine (isom. homoserine)



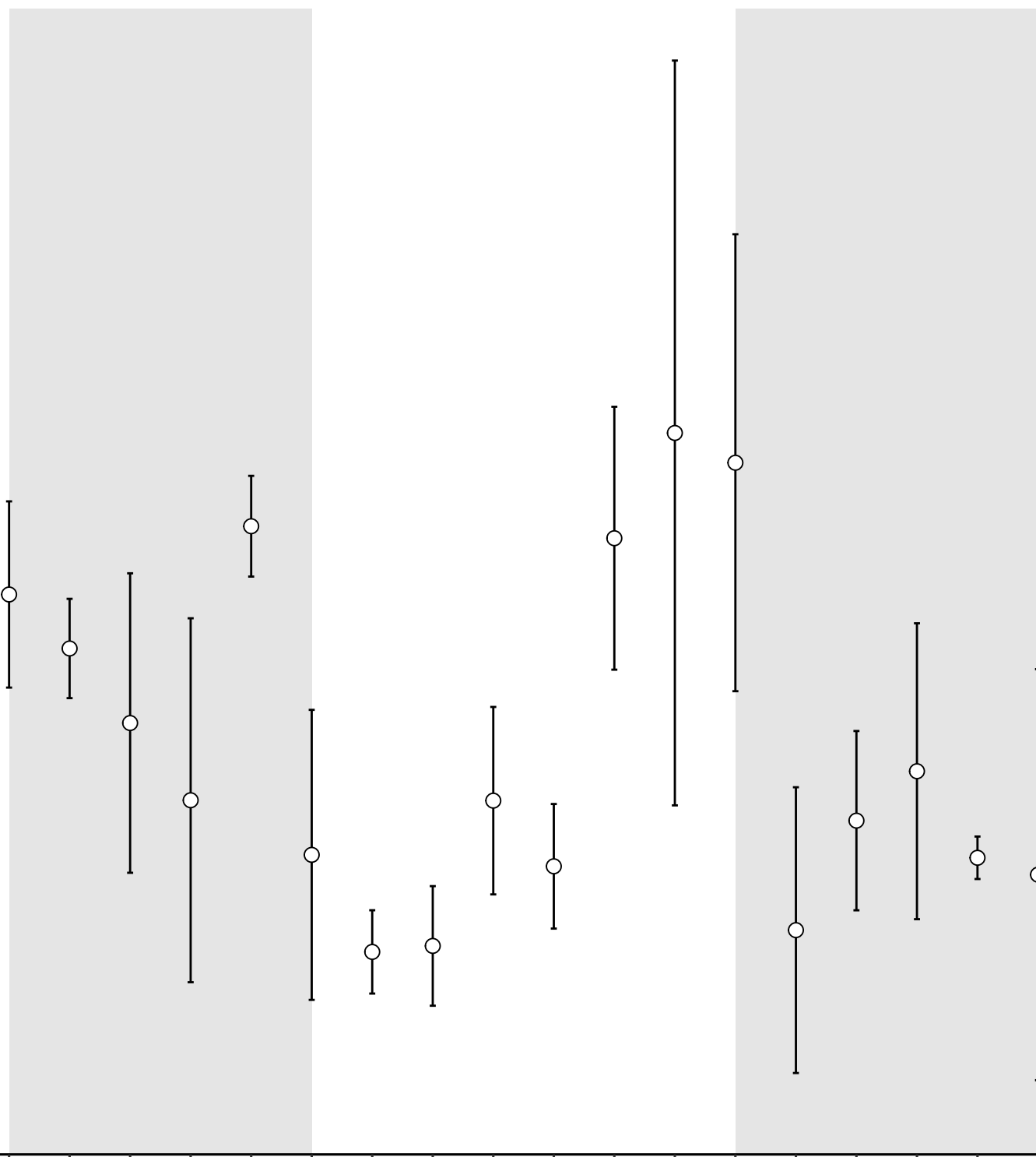
phenylalanine

avg. attomole per cell \pm sdev

10.0
7.5
5.0
2.5

timepoint

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46



proline

avg. attomole per cell \pm sdev

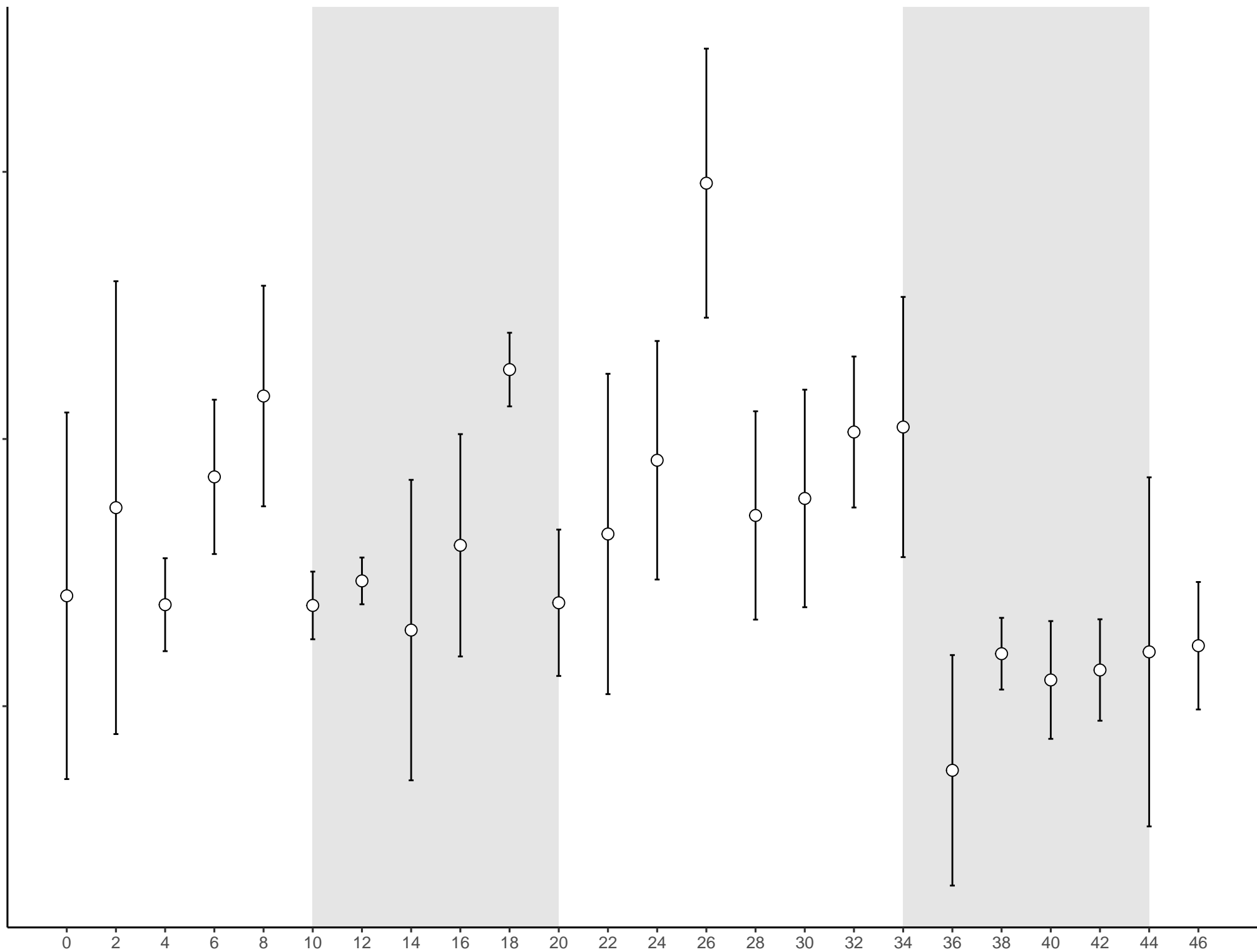
60

40

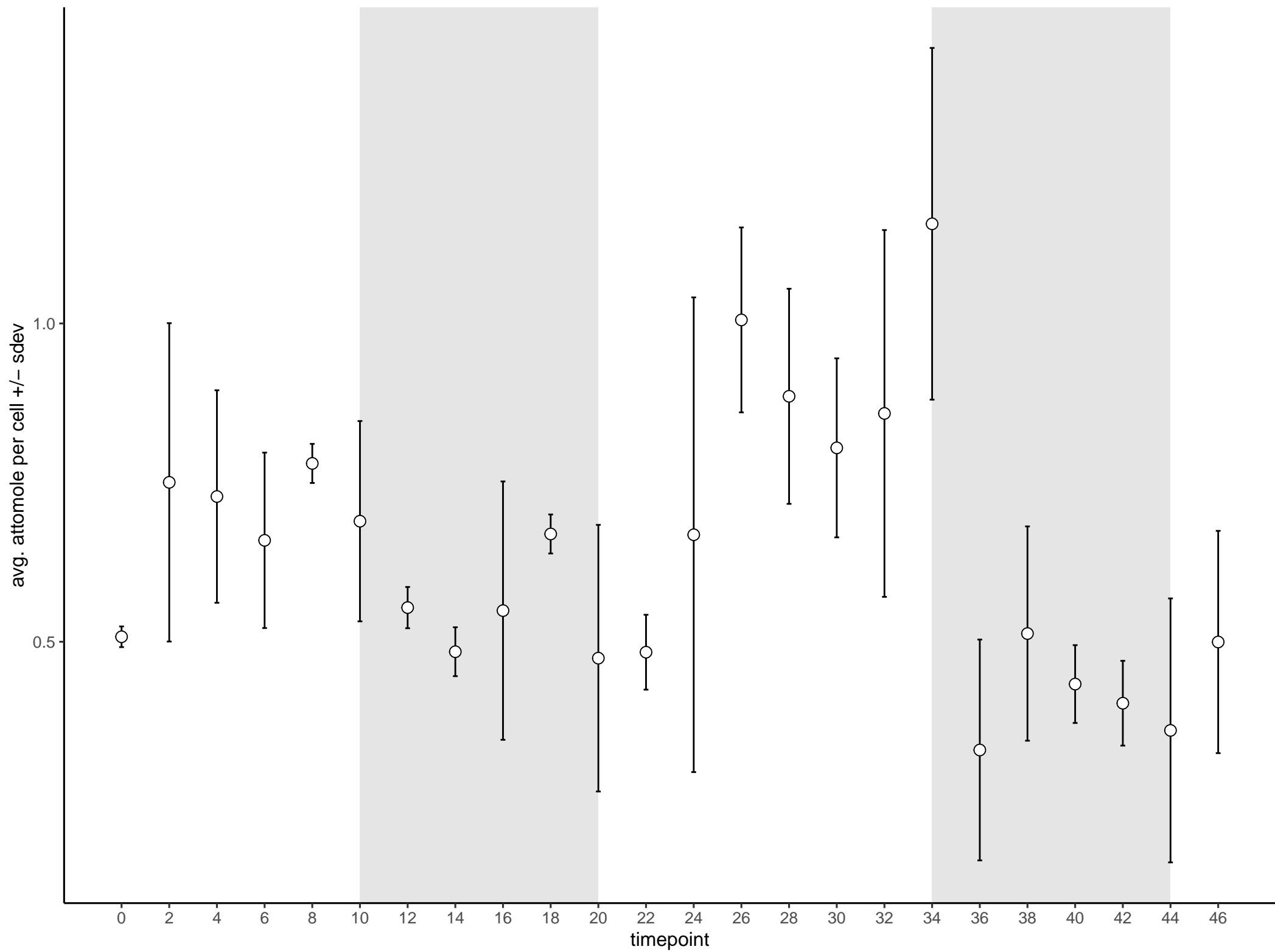
20

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46

timepoint

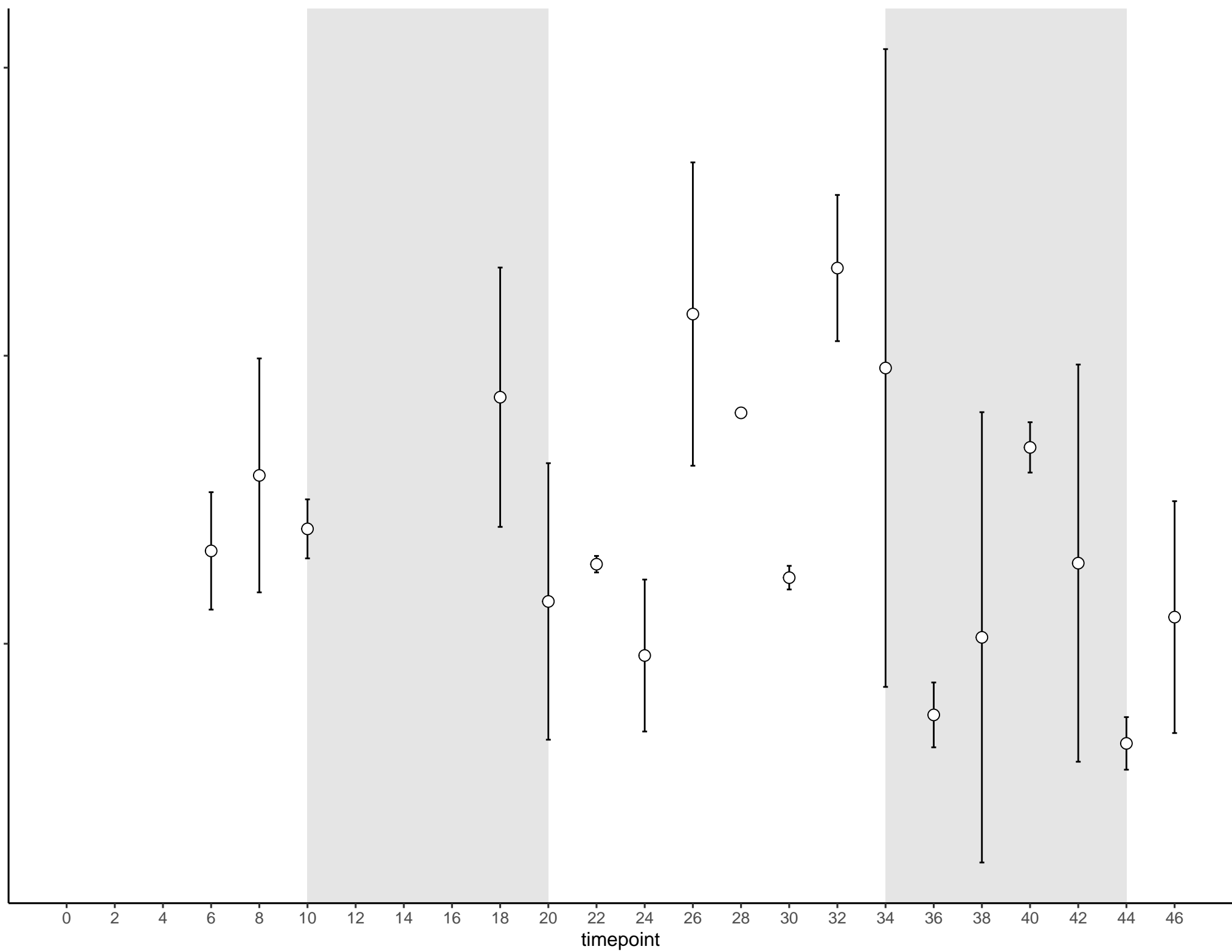


s-(5'-adenosyl)-L-homocysteine pos

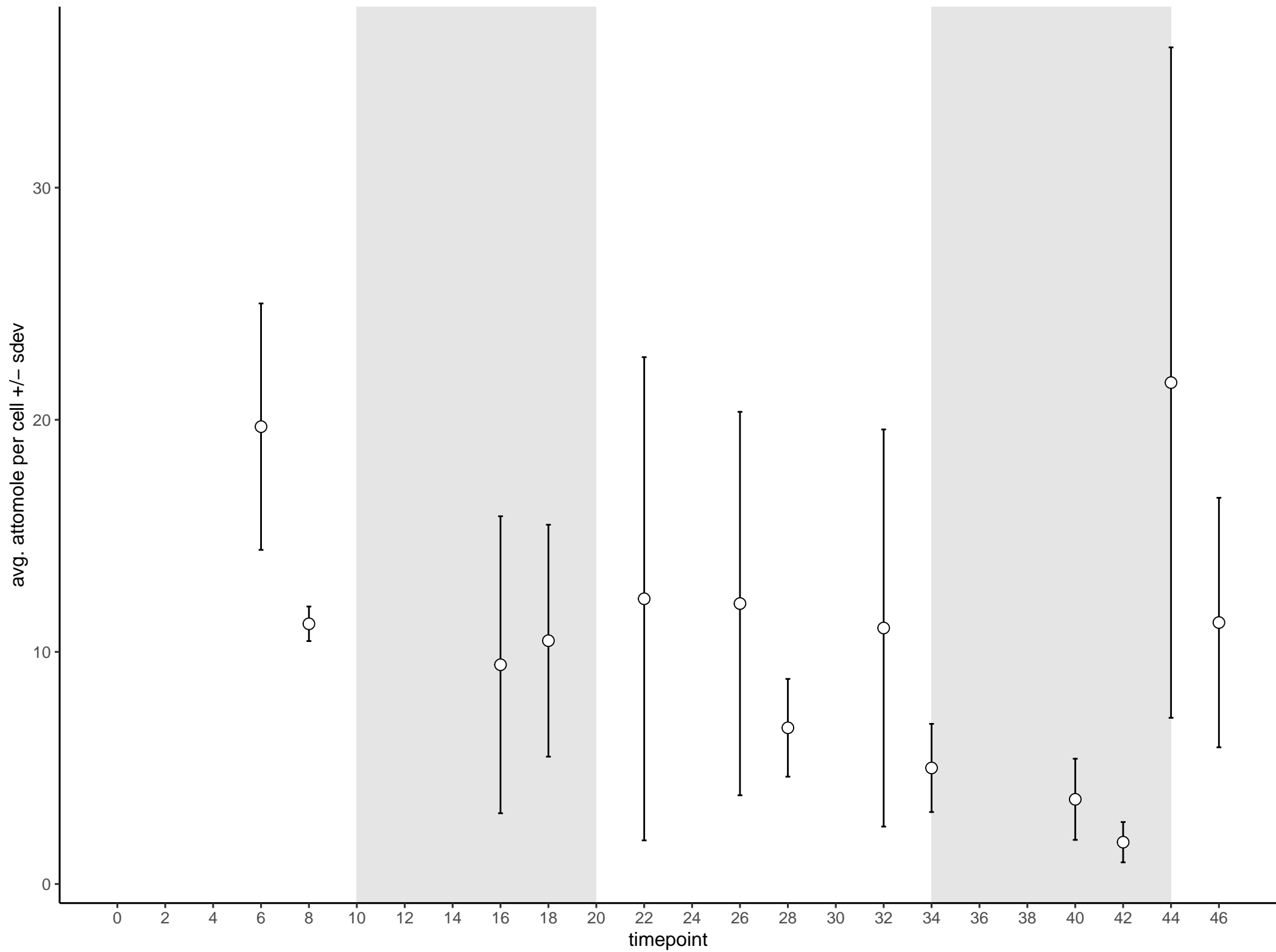


adenine pos

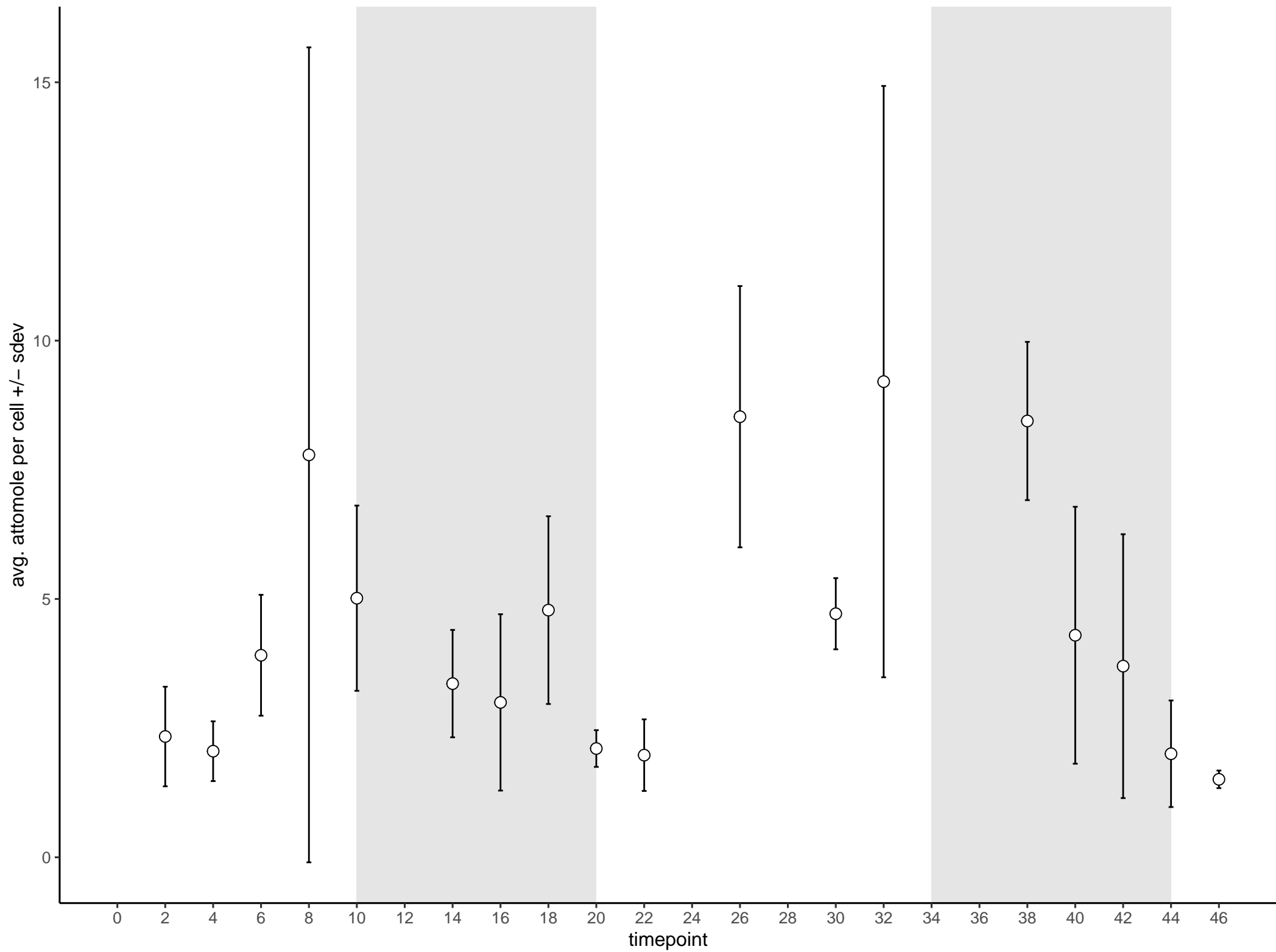
avg. attomole per cell \pm sdev



alpha-ketoglutaric acid



aspartic acid neg



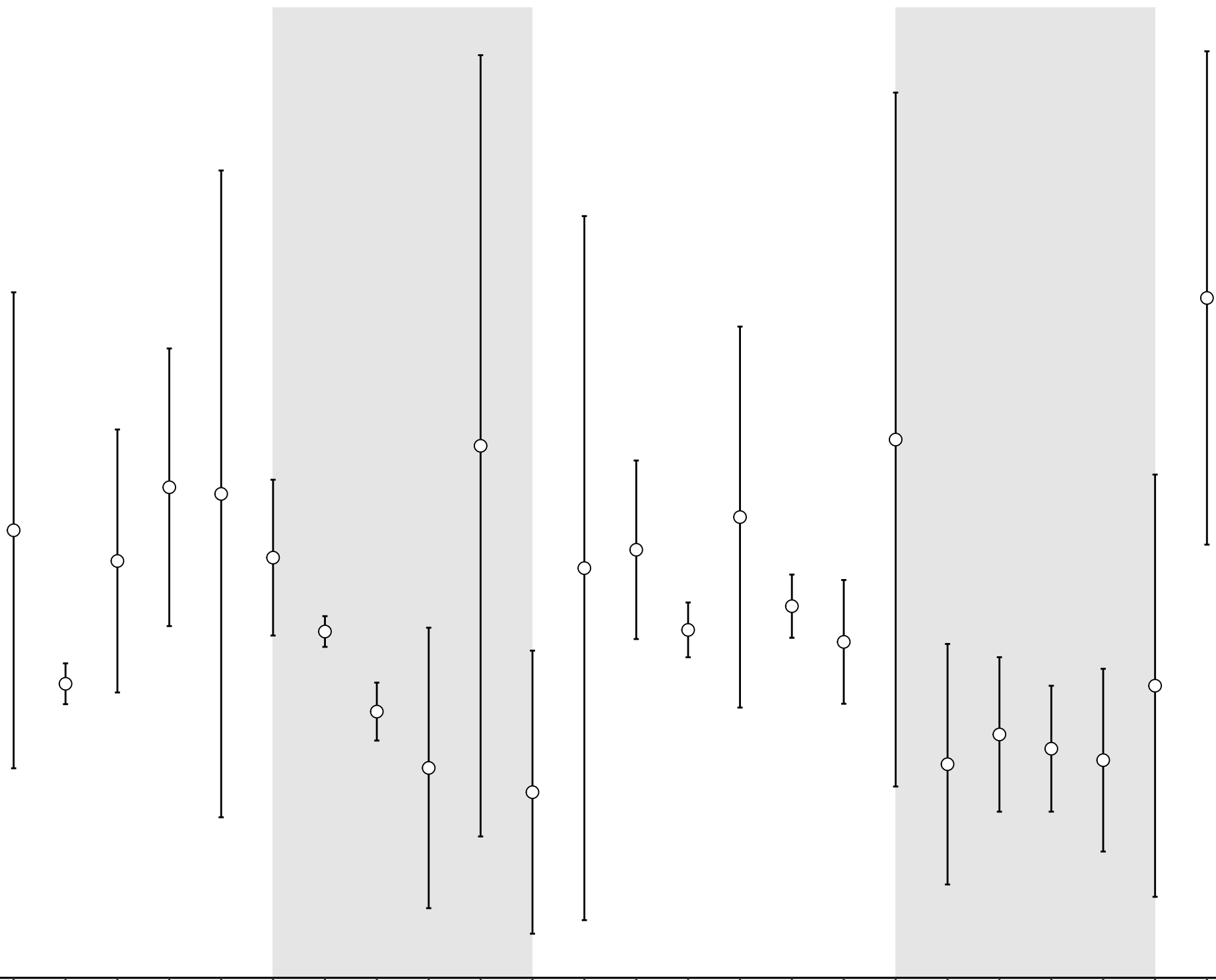
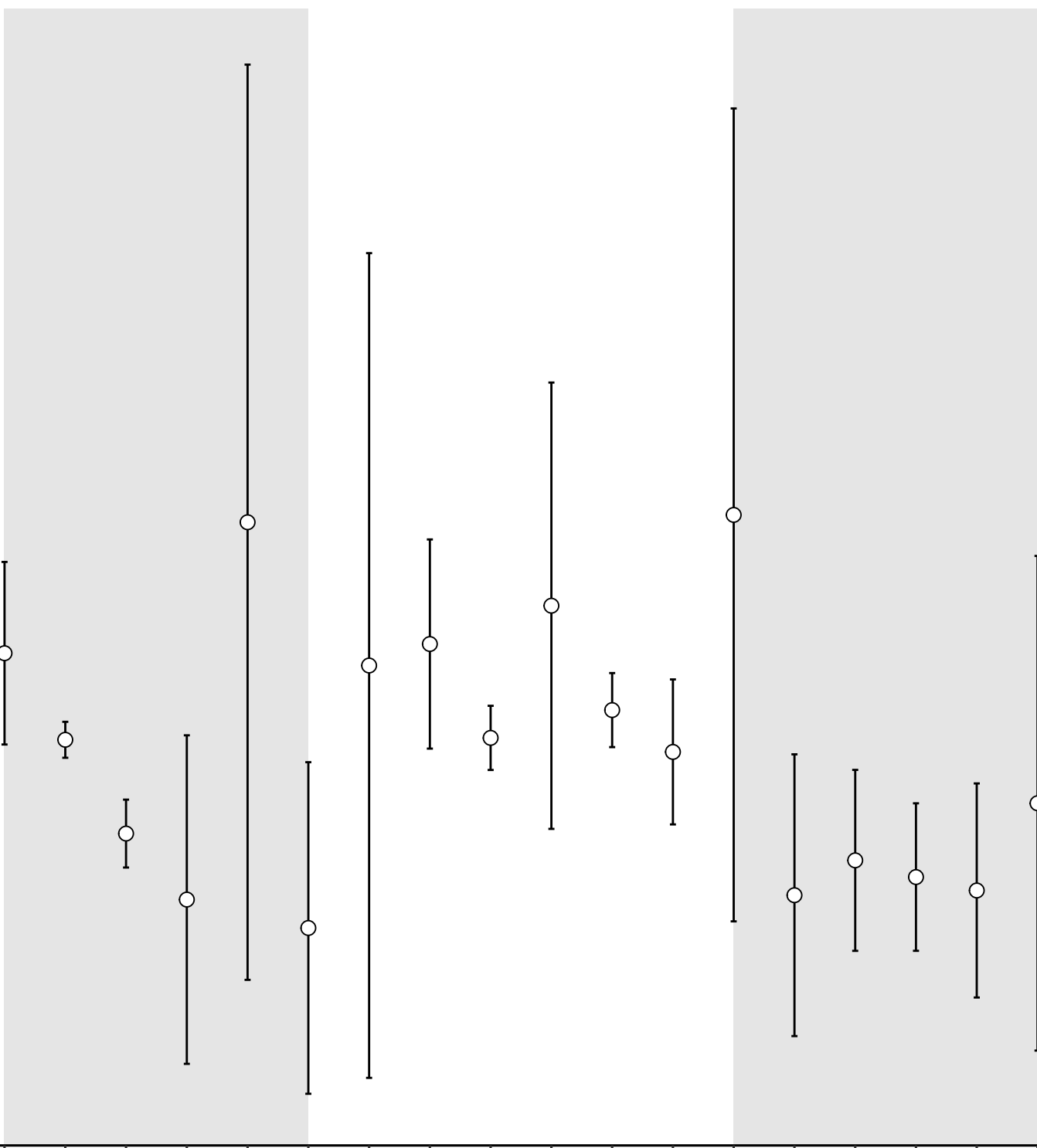
s-adenosyl-l-methionine

avg. attomole per cell \pm sdev

25
20
15
10
5

timepoint

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46



glutamic acid neg

avg. attomole per cell \pm sdev

60000

40000

20000

timepoint

0

2

4

6

8

10

12

14

16

18

20

22

24

26

28

30

32

34

36

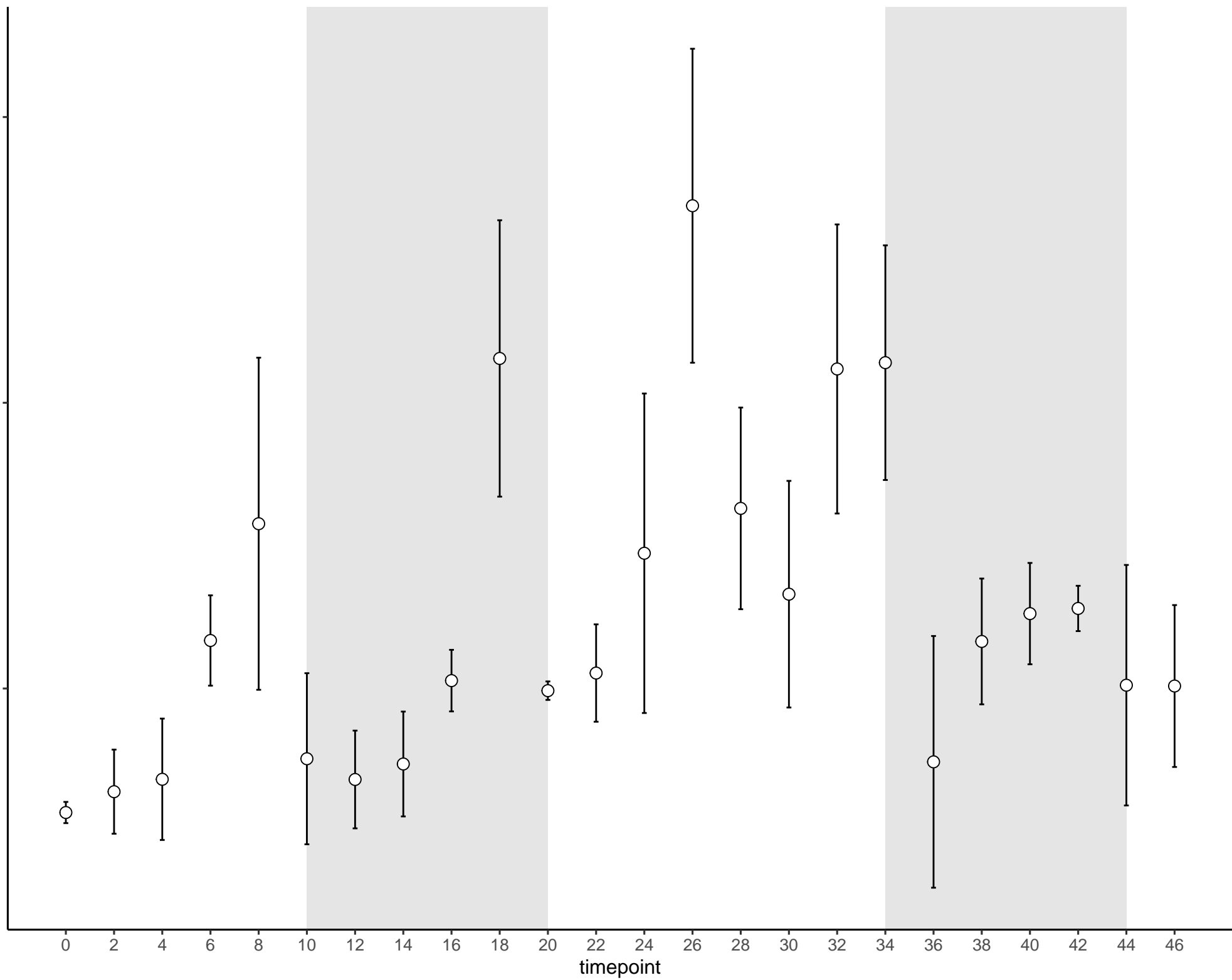
38

40

42

44

46



sucrose387 neg

avg. attomole per cell \pm sdev

timepoint

7500

5000

2500

0

0

2

4

6

8

10

12

14

16

18

20

22

24

26

28

30

32

34

36

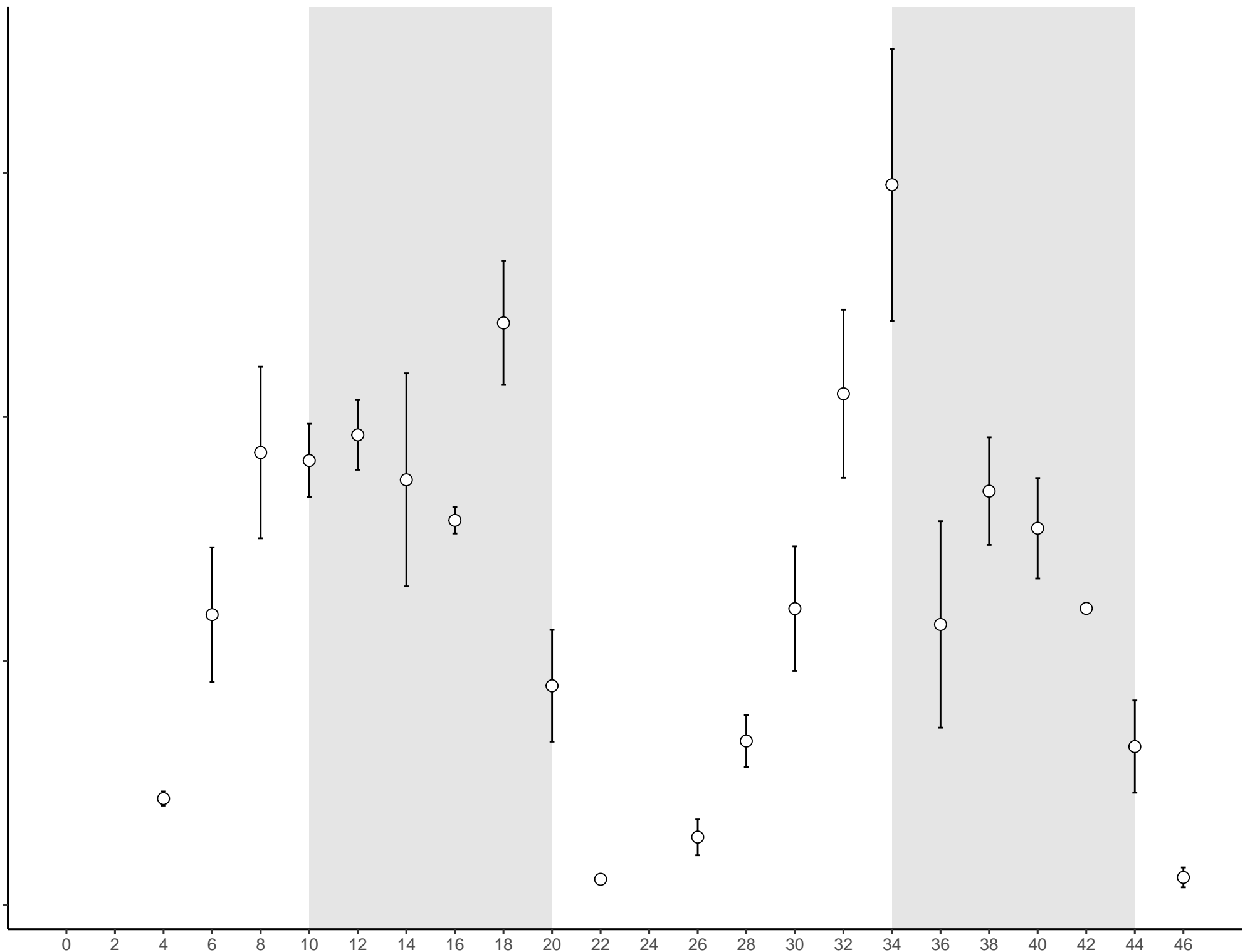
38

40

42

44

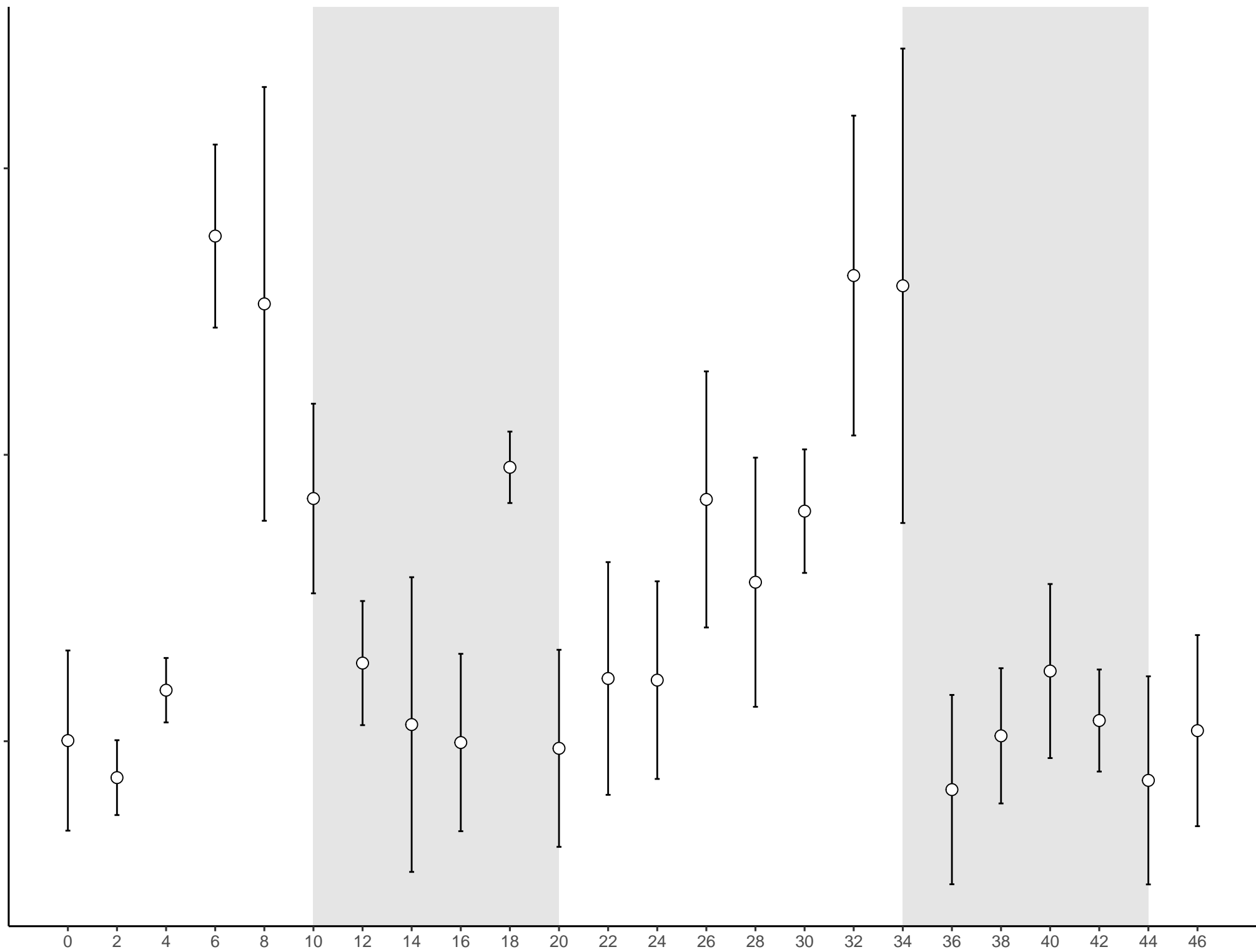
46



tyrosine

avg. attomole per cell \pm sdev

timepoint



UDP-glucose

avg. attomole per cell \pm sdev

0.0

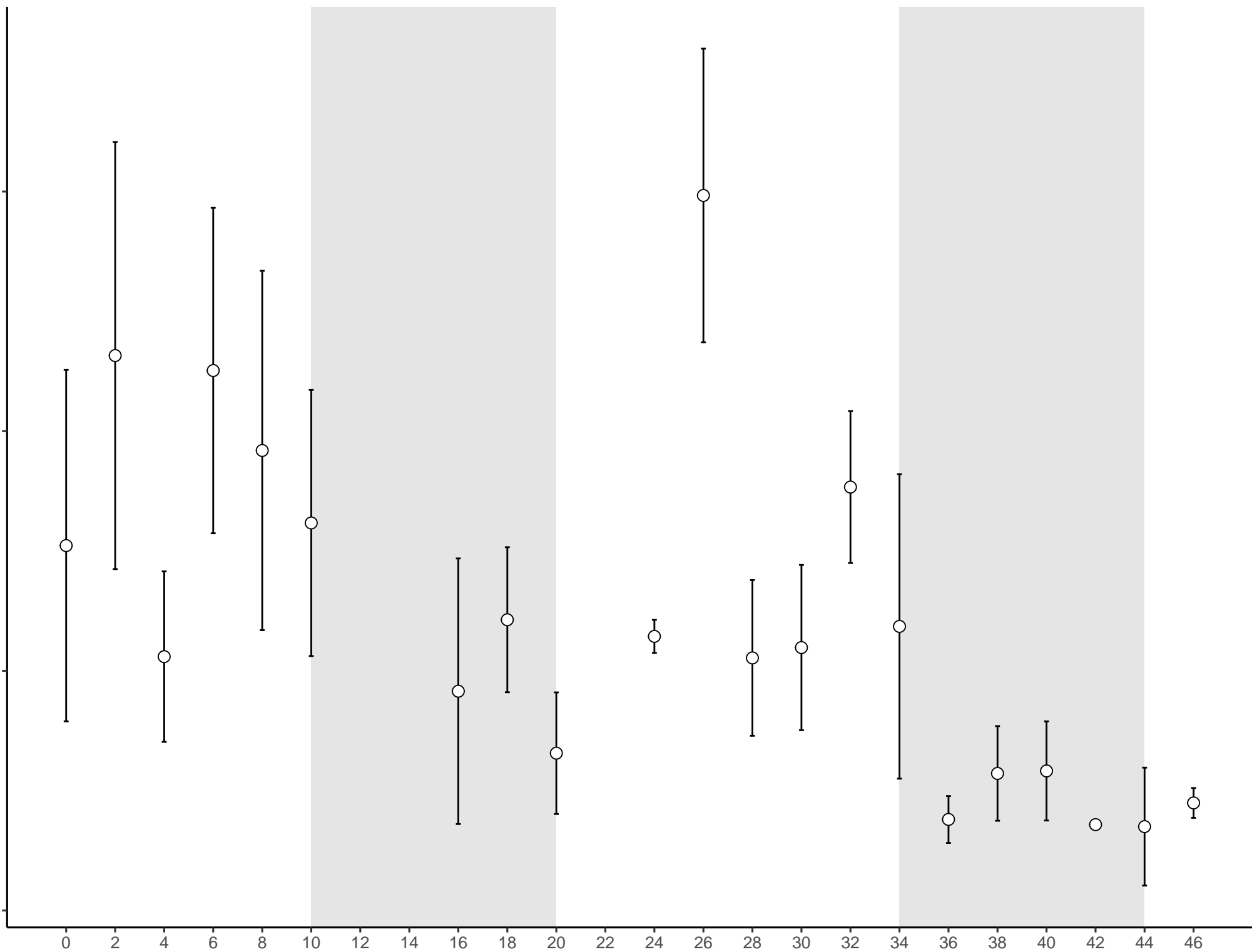
2.5

5.0

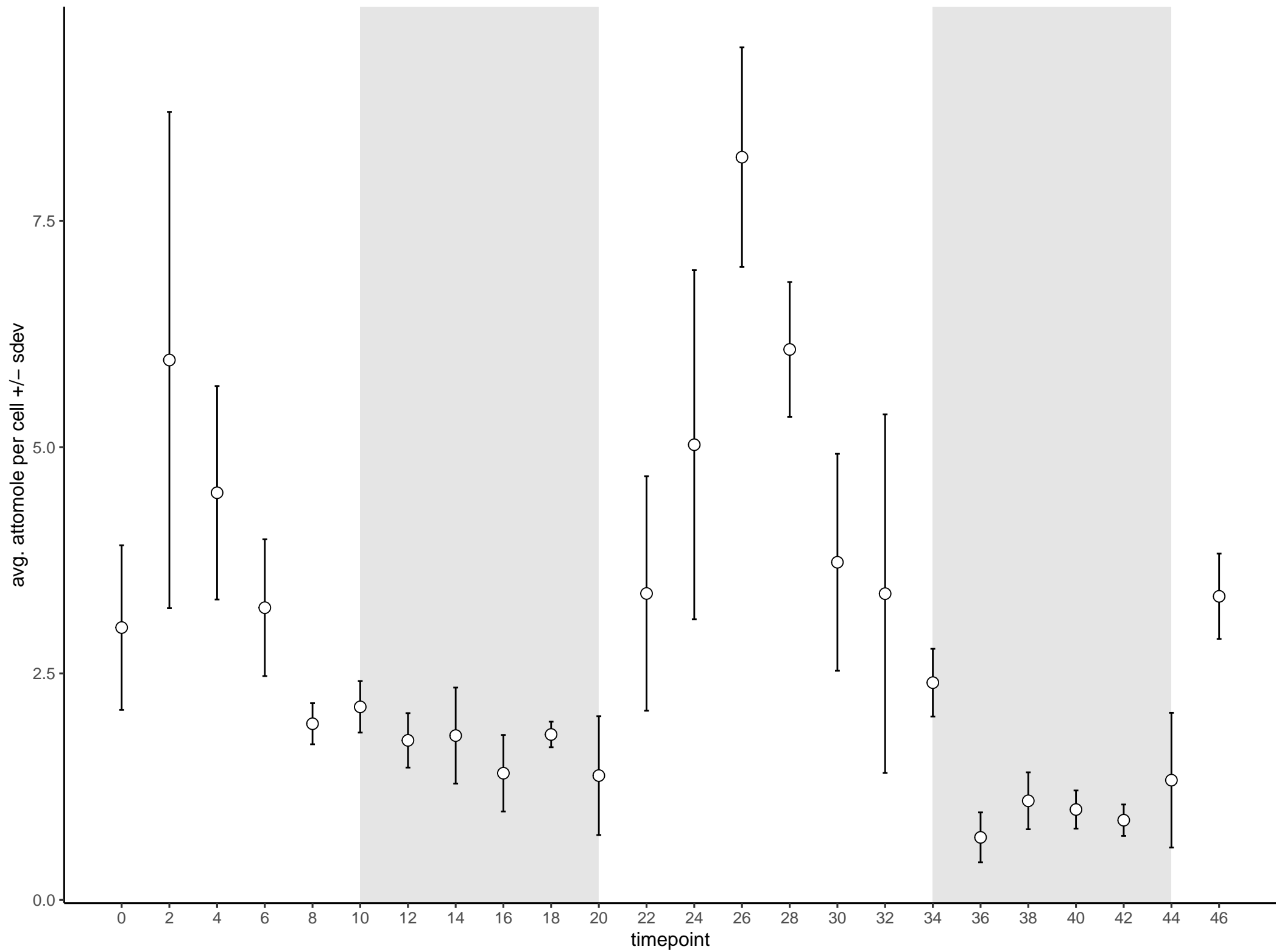
7.5

timepoint

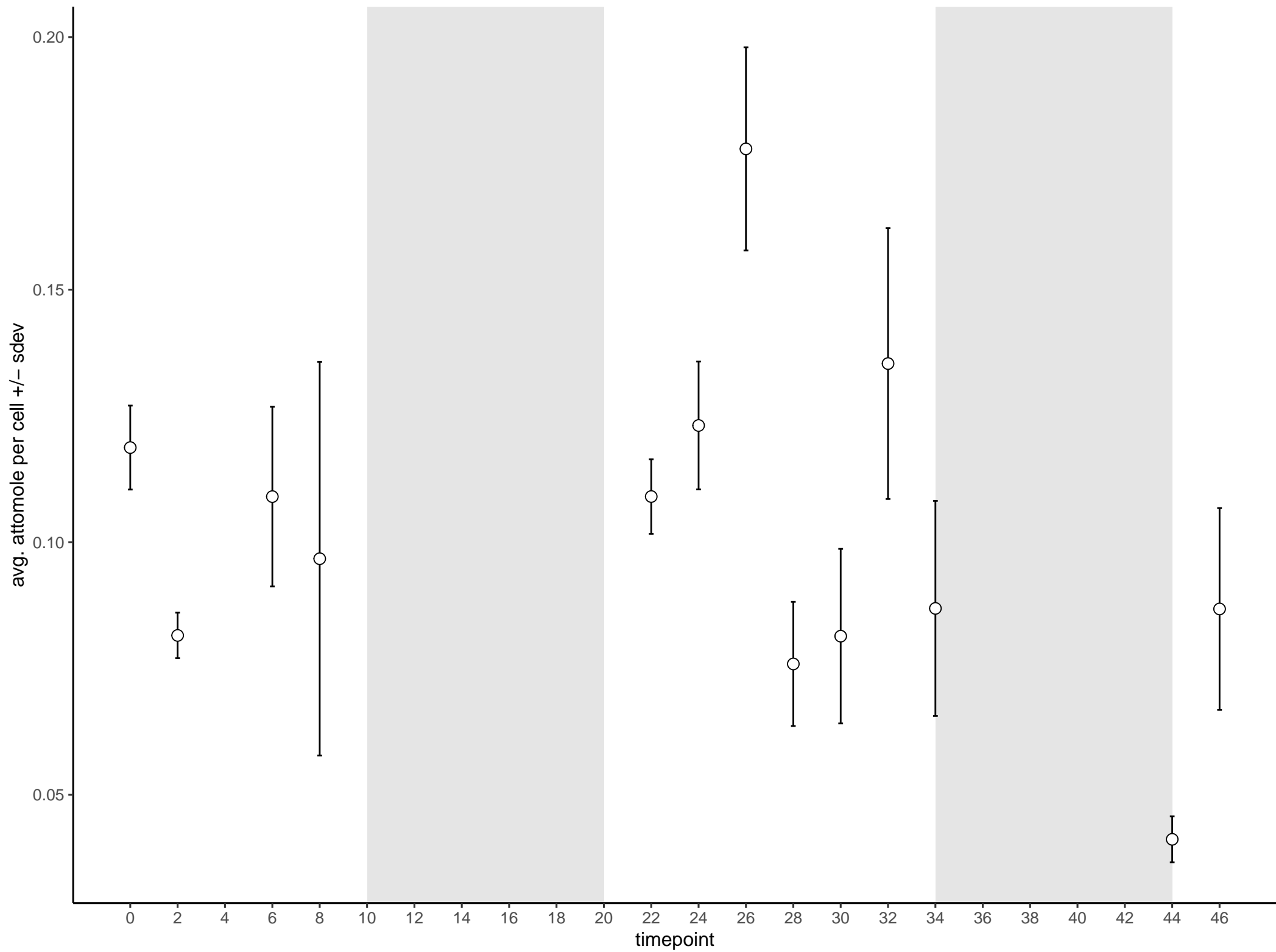
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46



uridine 5-monophosphate pos



xanthosine neg



pantothenic acid neg

avg. attomole per cell \pm sdev

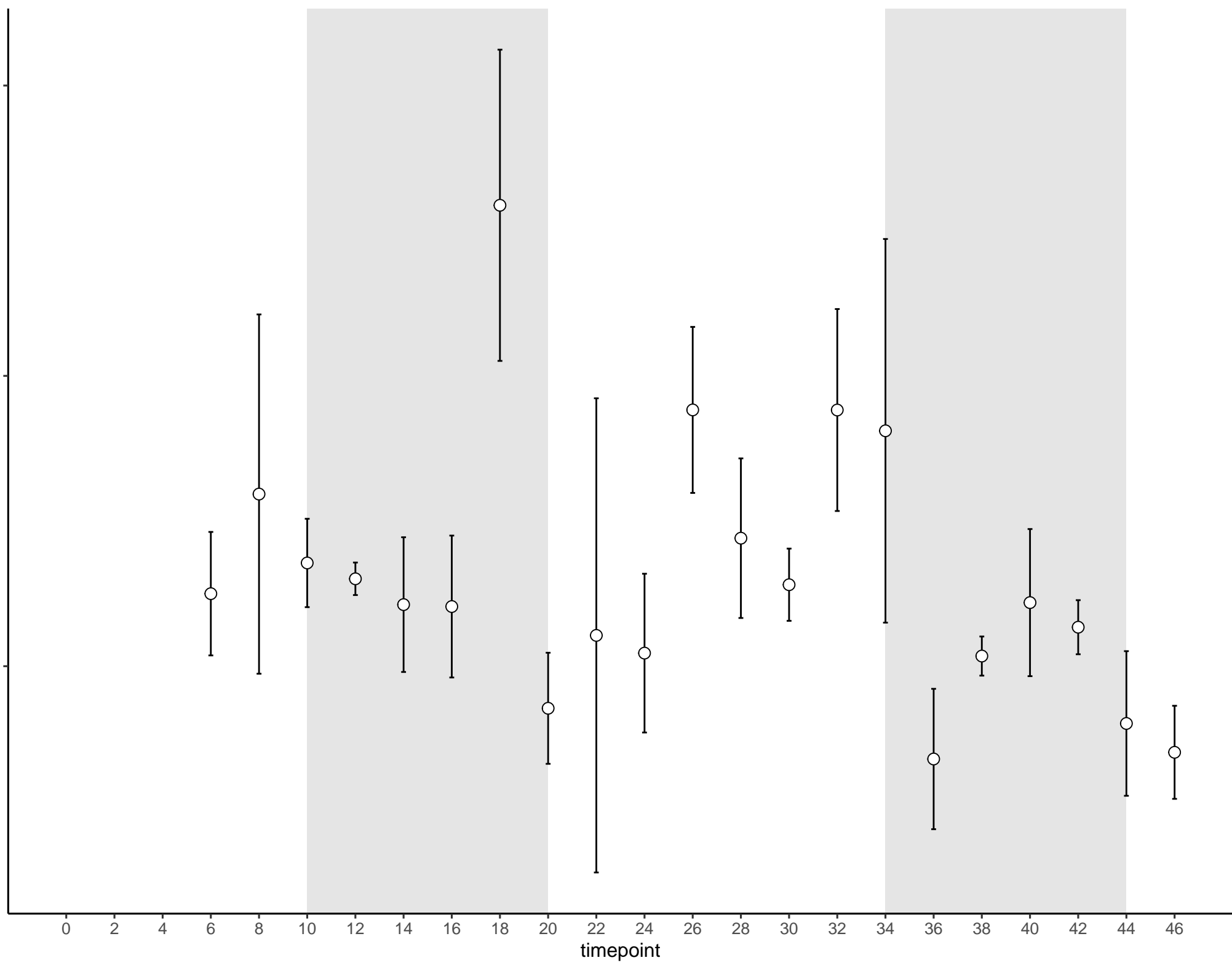
0.3

0.2

0.1

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46

timepoint



kynurenine

avg. attomole per cell \pm sdev

0.3

0.2

0.1

0.0

0

2

4

6

8

10

12

14

16

18

20

22

24

26

28

30

32

34

36

38

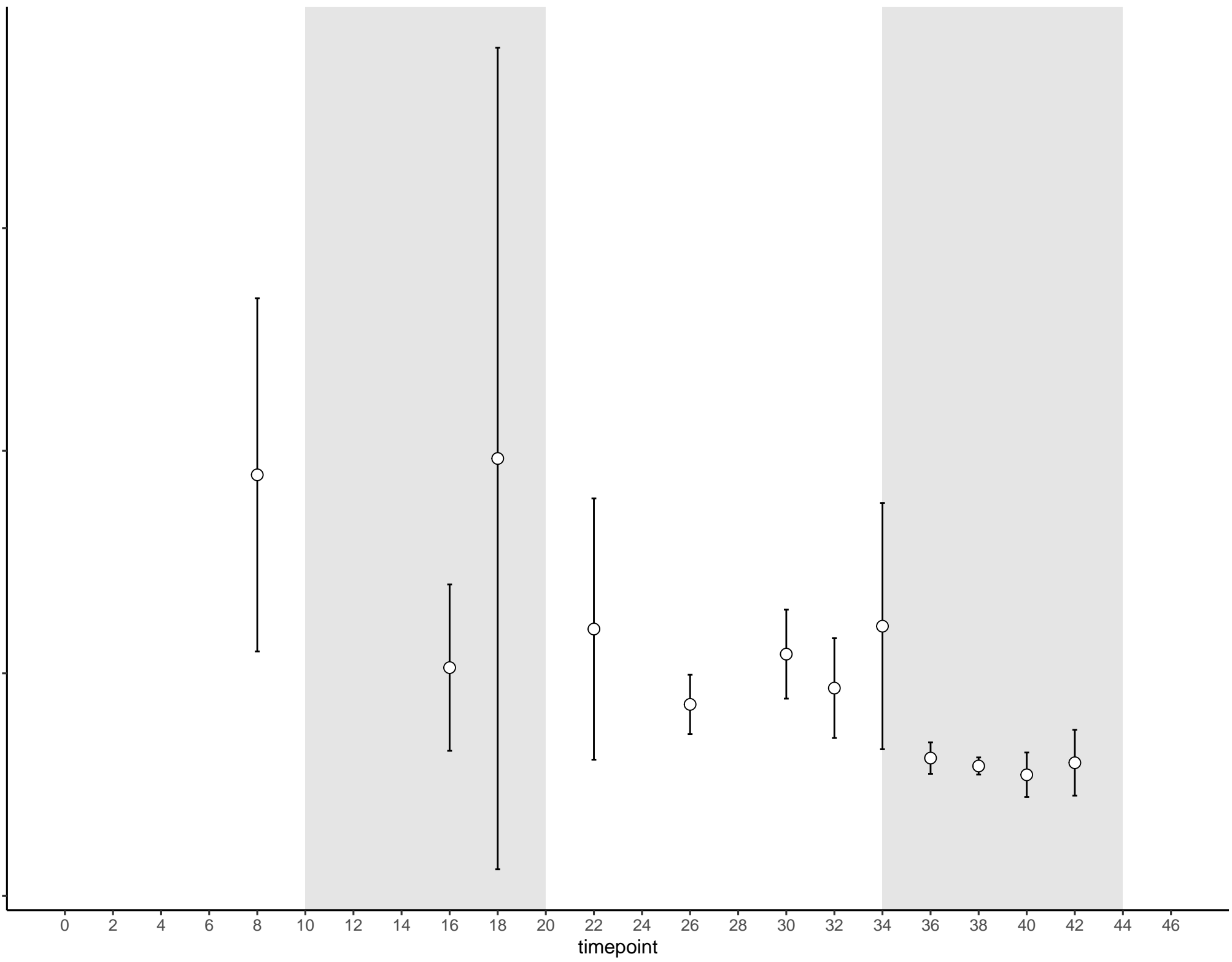
40

42

44

46

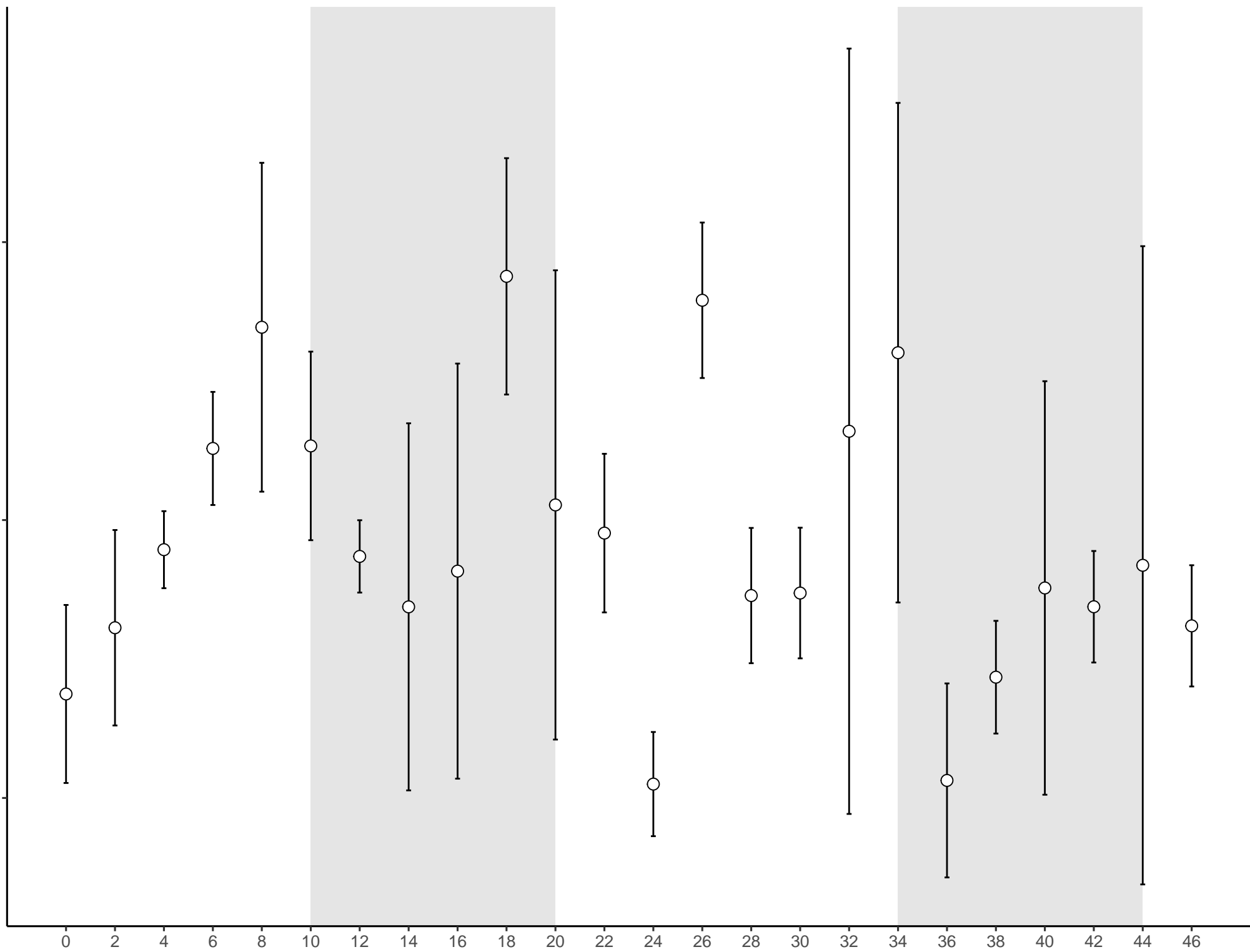
timepoint



leucine

avg. attomole per cell \pm sdev

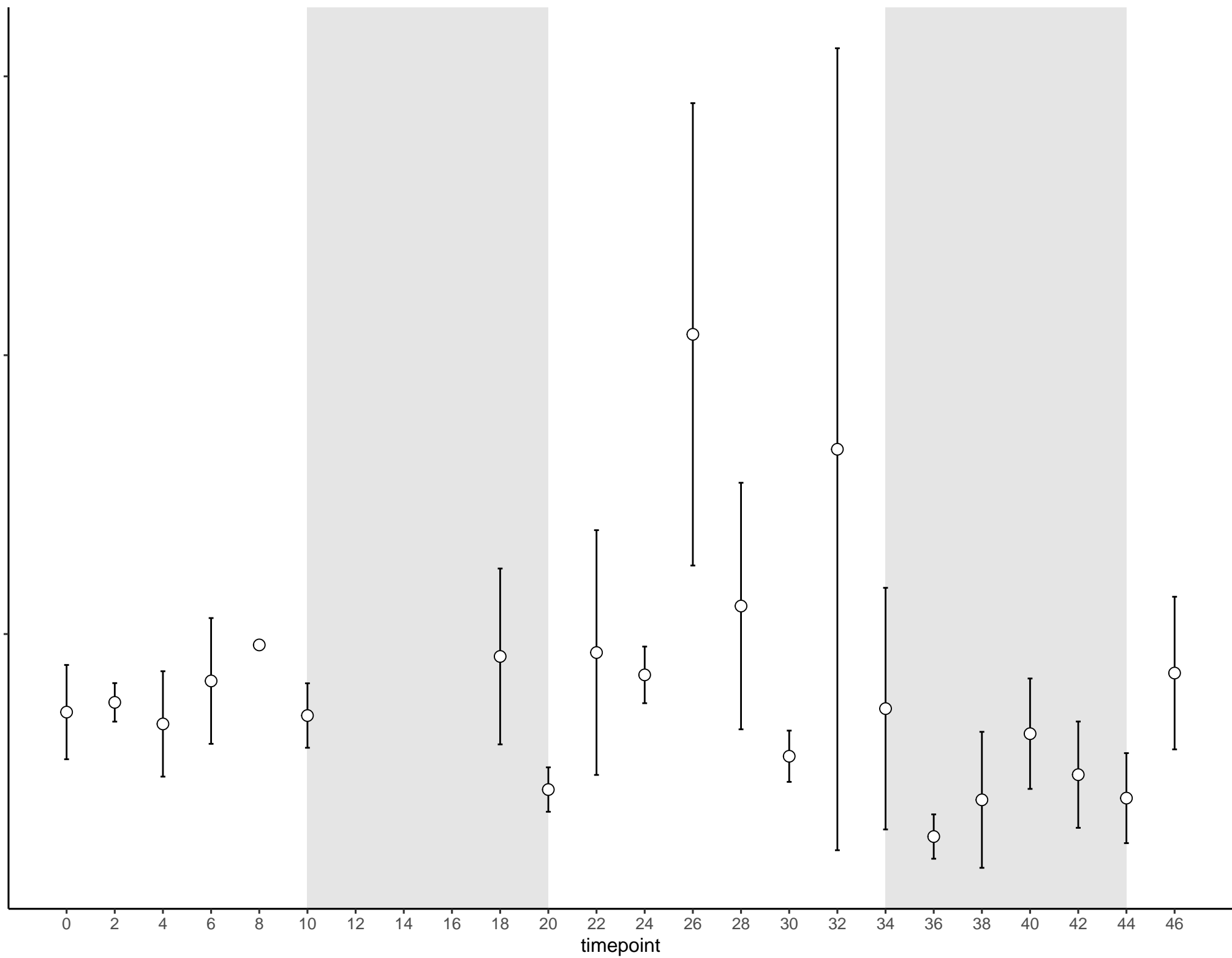
timepoint



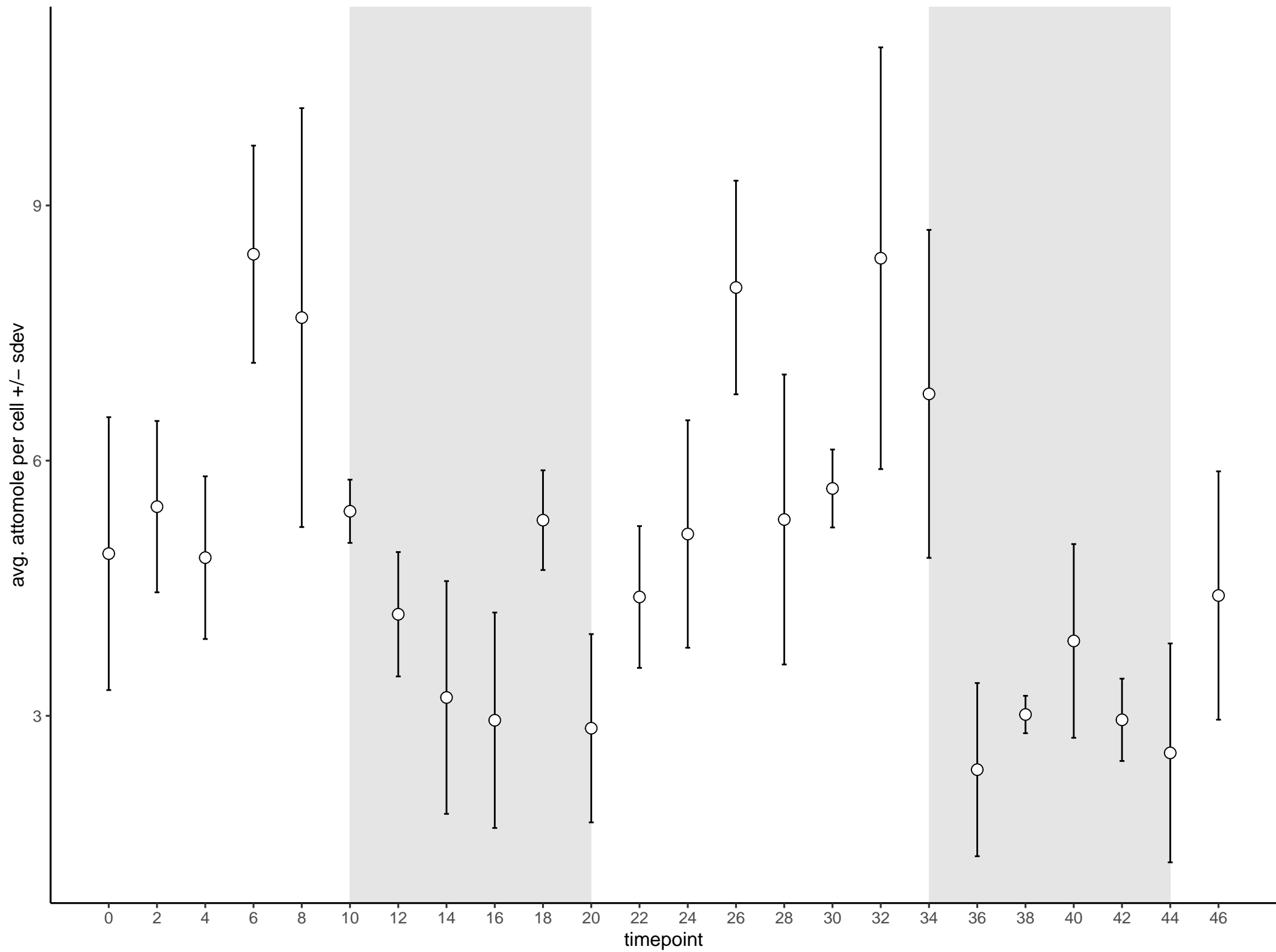
inosine 5-monophosphate pos

avg. attomole per cell \pm sdev

timepoint



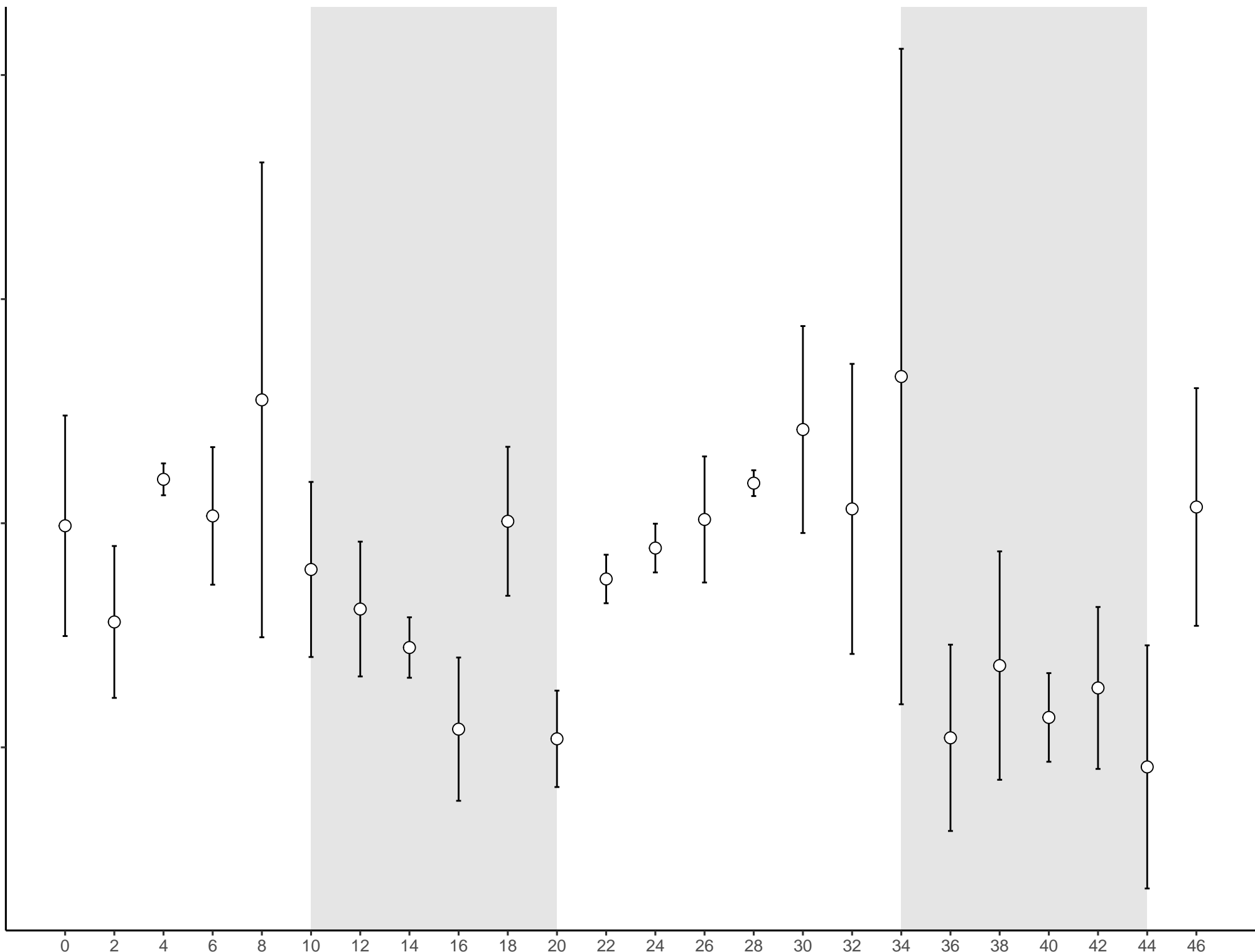
isoleucine



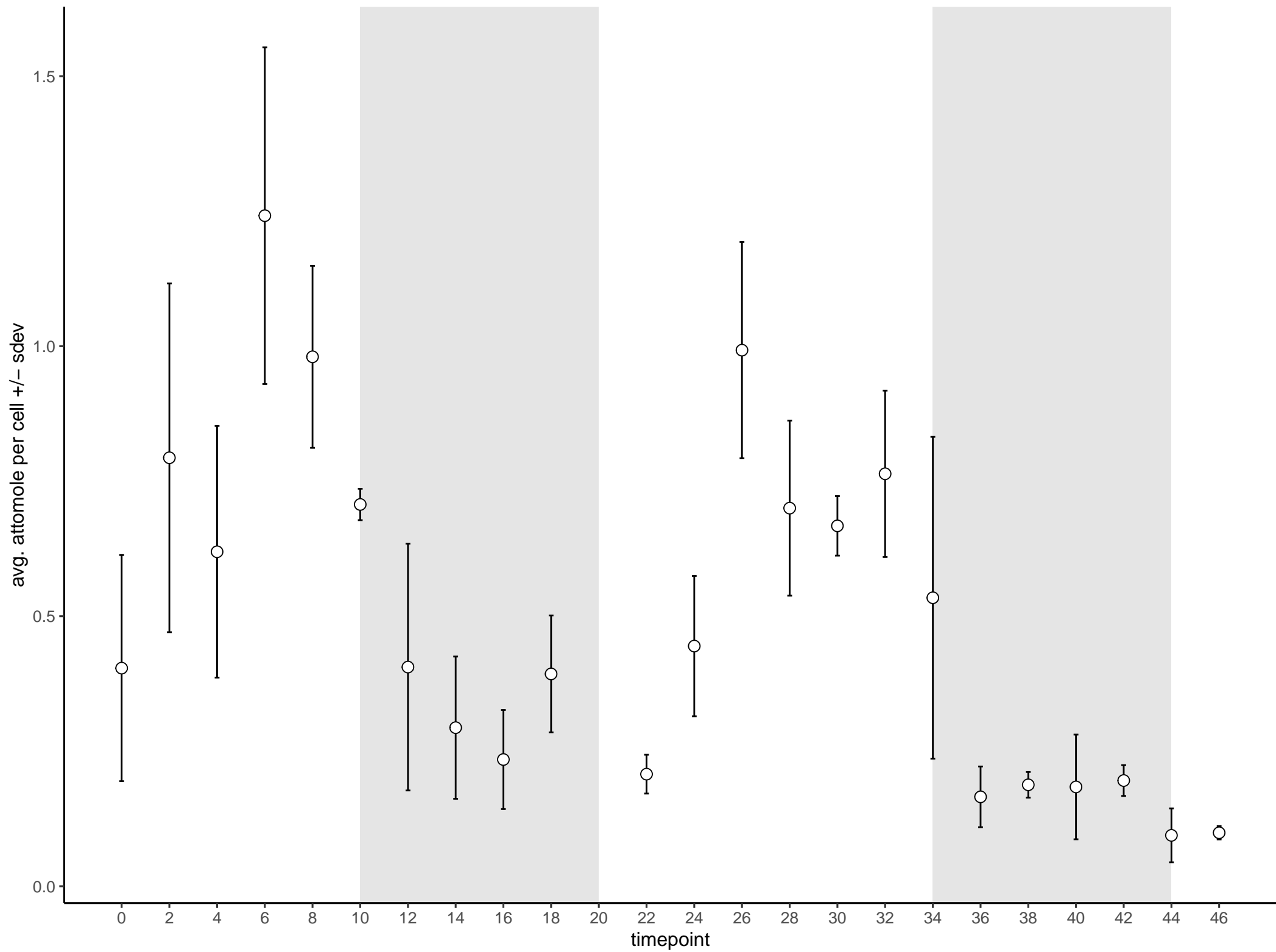
MTA

avg. attomole per cell \pm sdev

timepoint



n-acetylglucosamine204



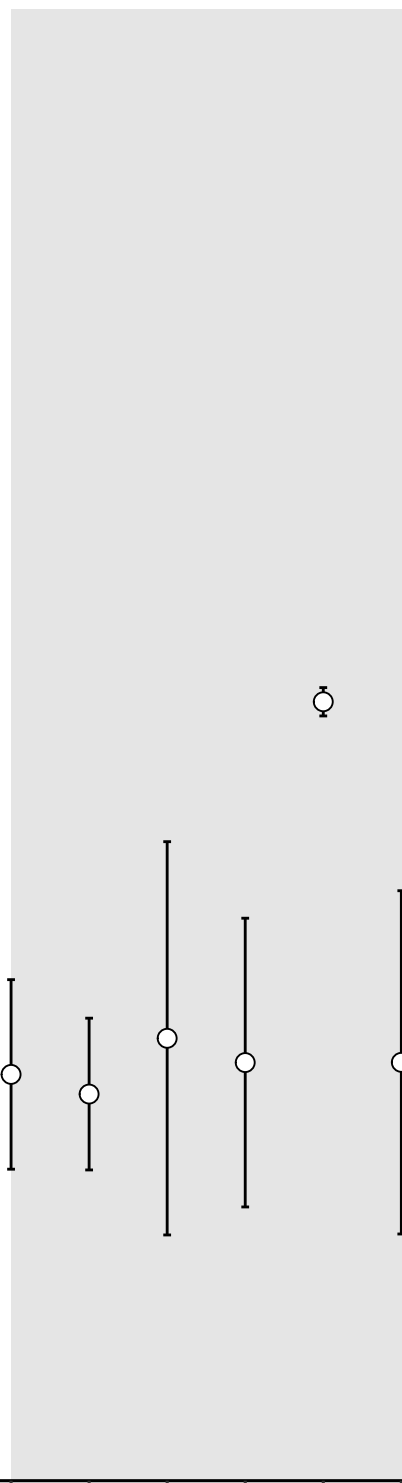
citric acid

avg. attomole per cell \pm sdev

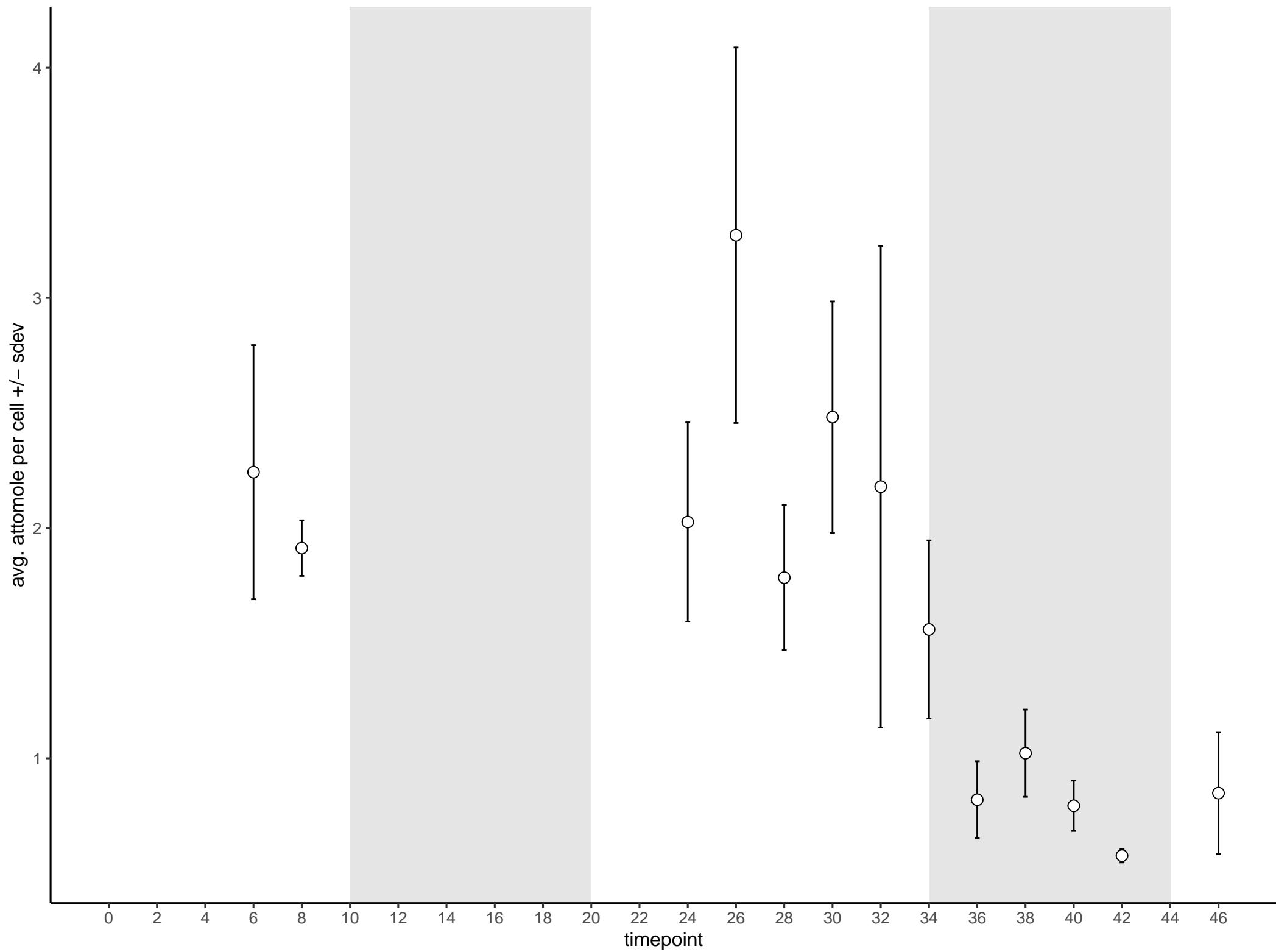
300
200
100
0

timepoint

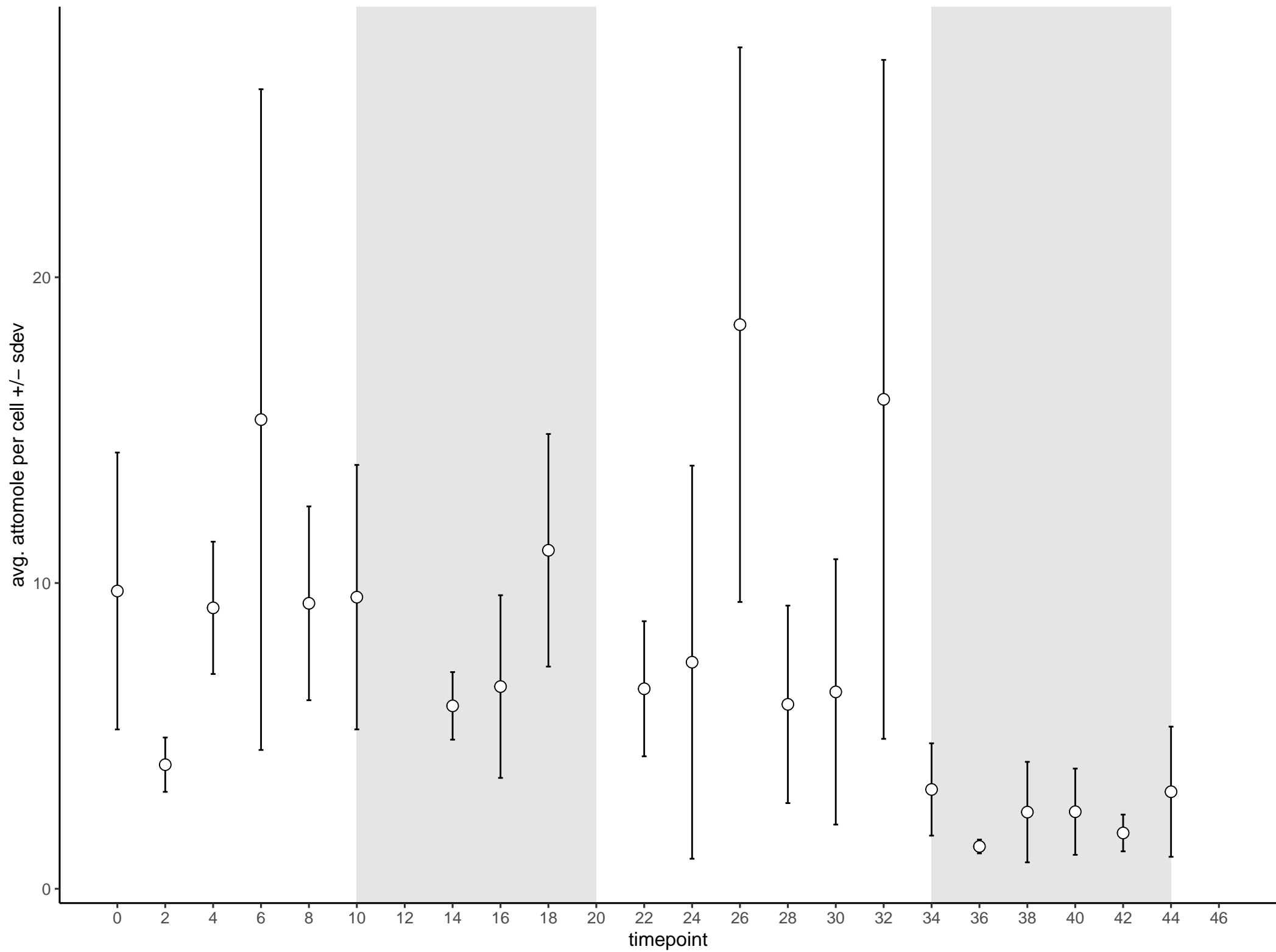
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46



methionine



succinic acid



T_90to30

avg. attomole per cell \pm sdev

30

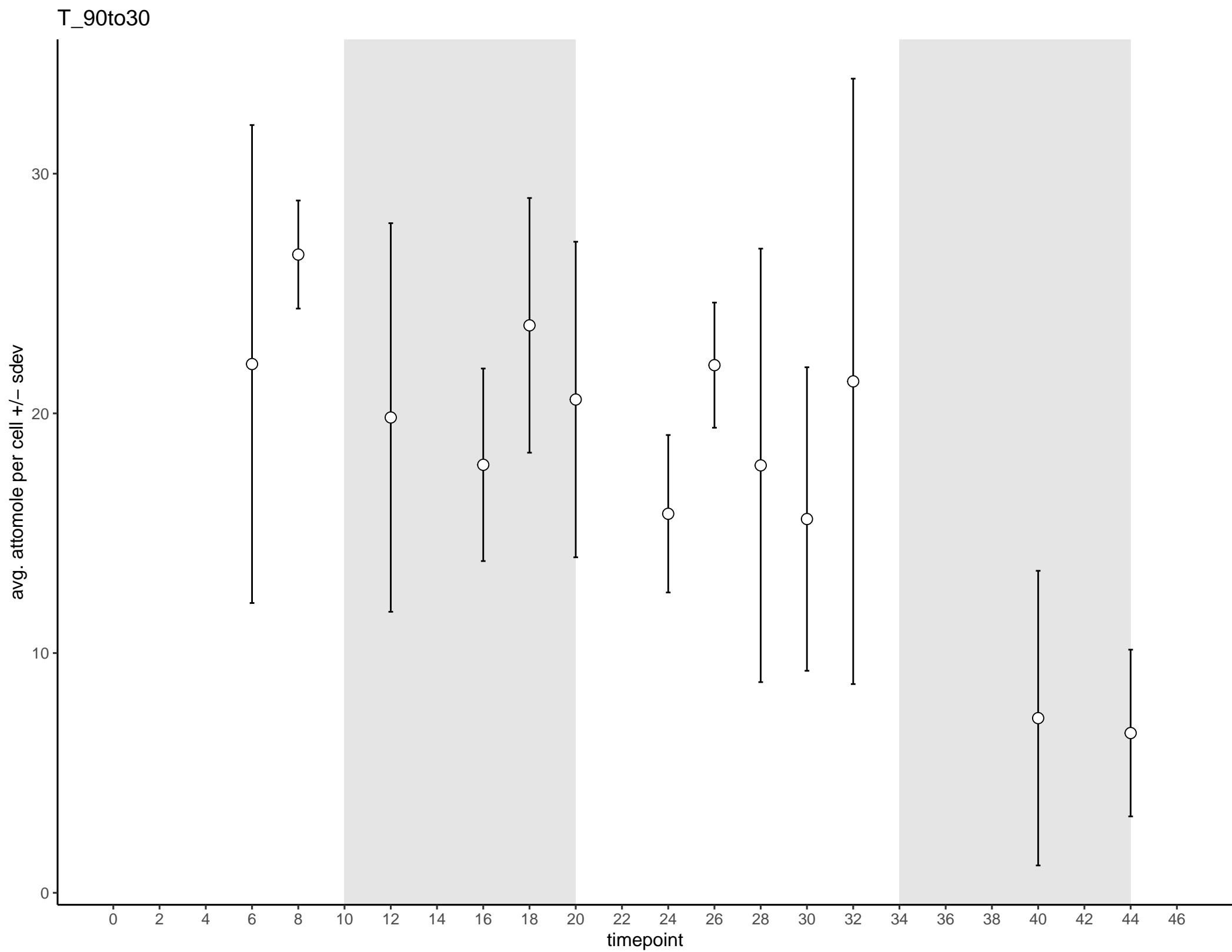
20

10

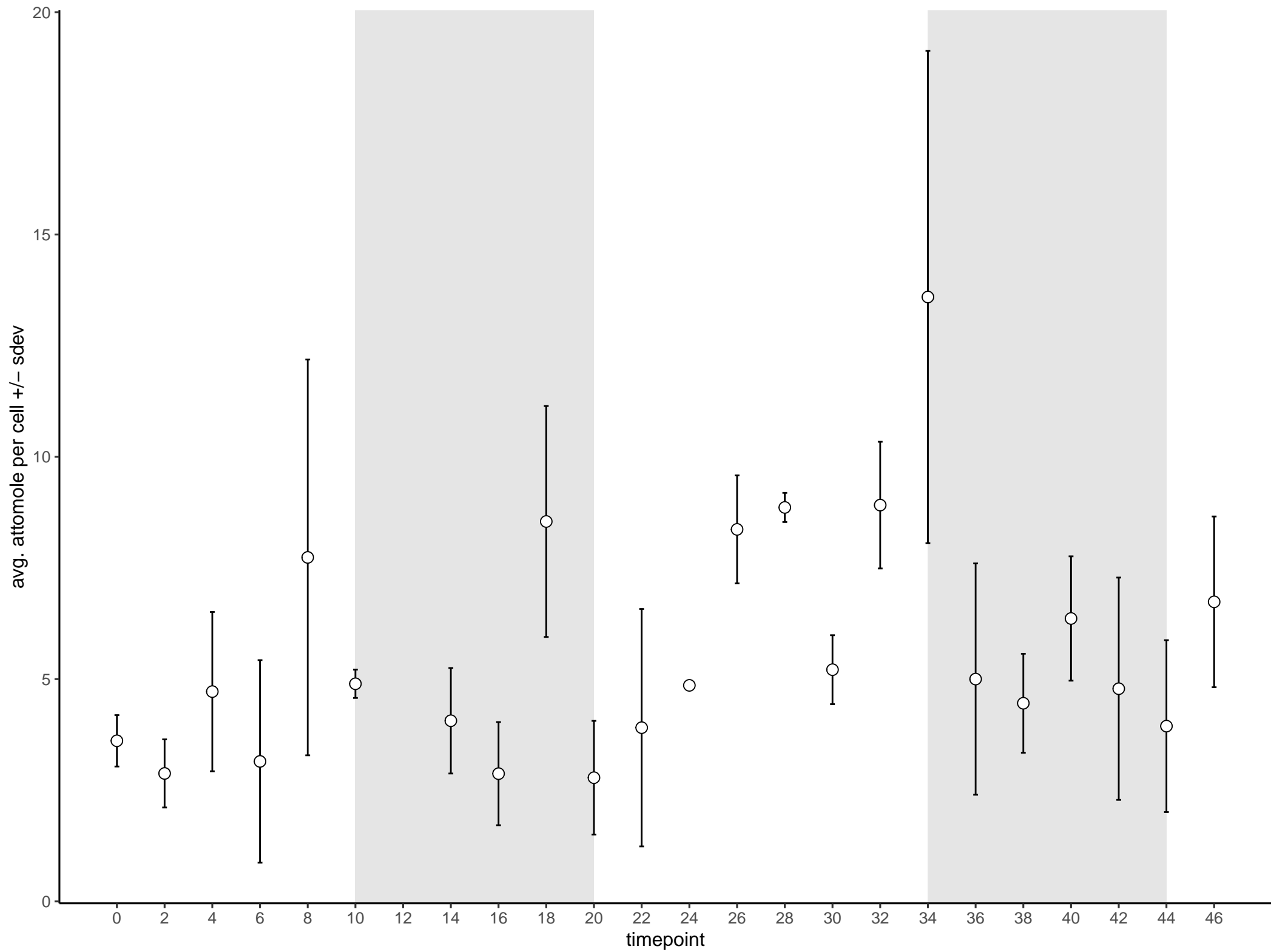
0

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46

timepoint

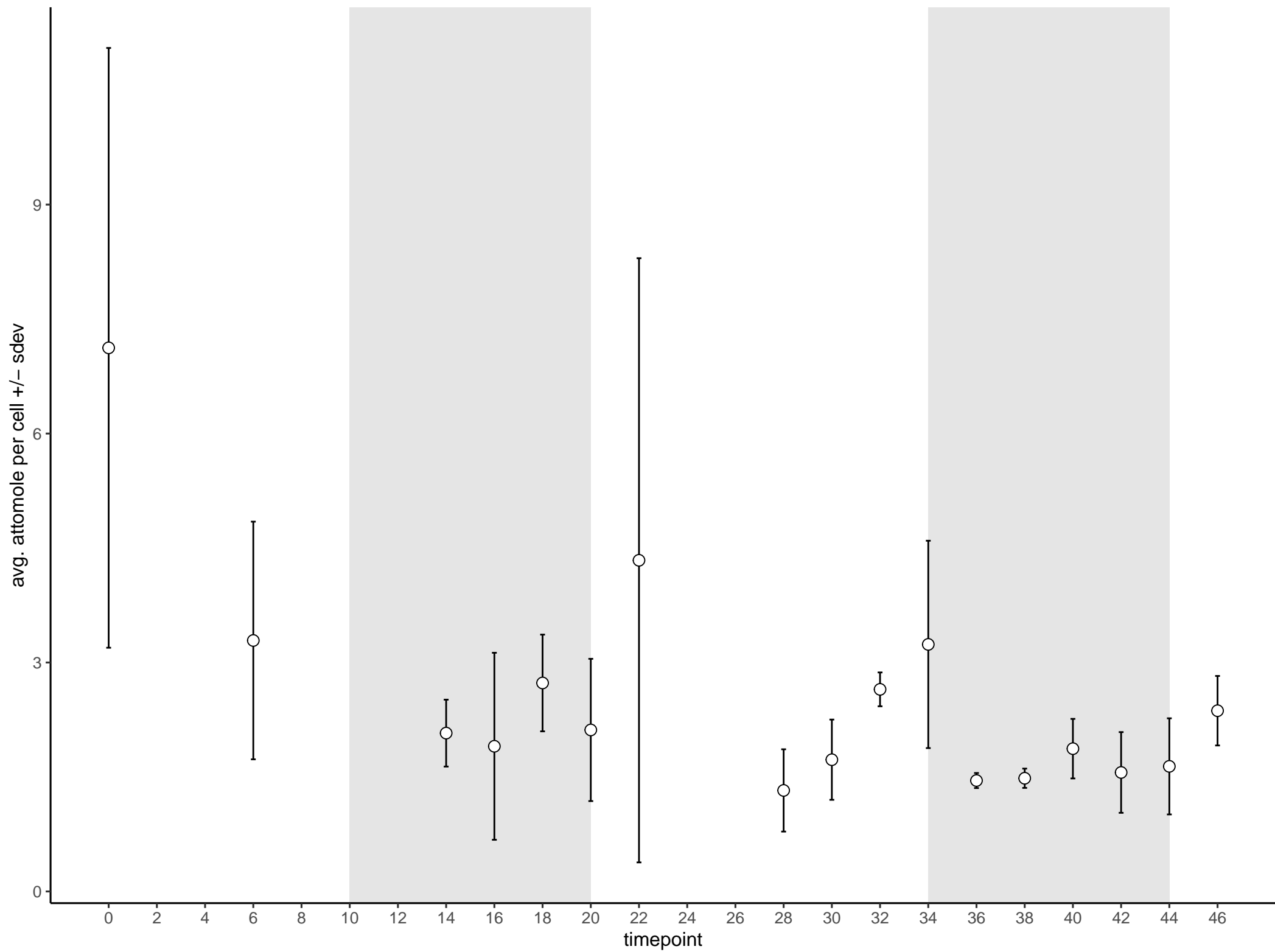


NADP



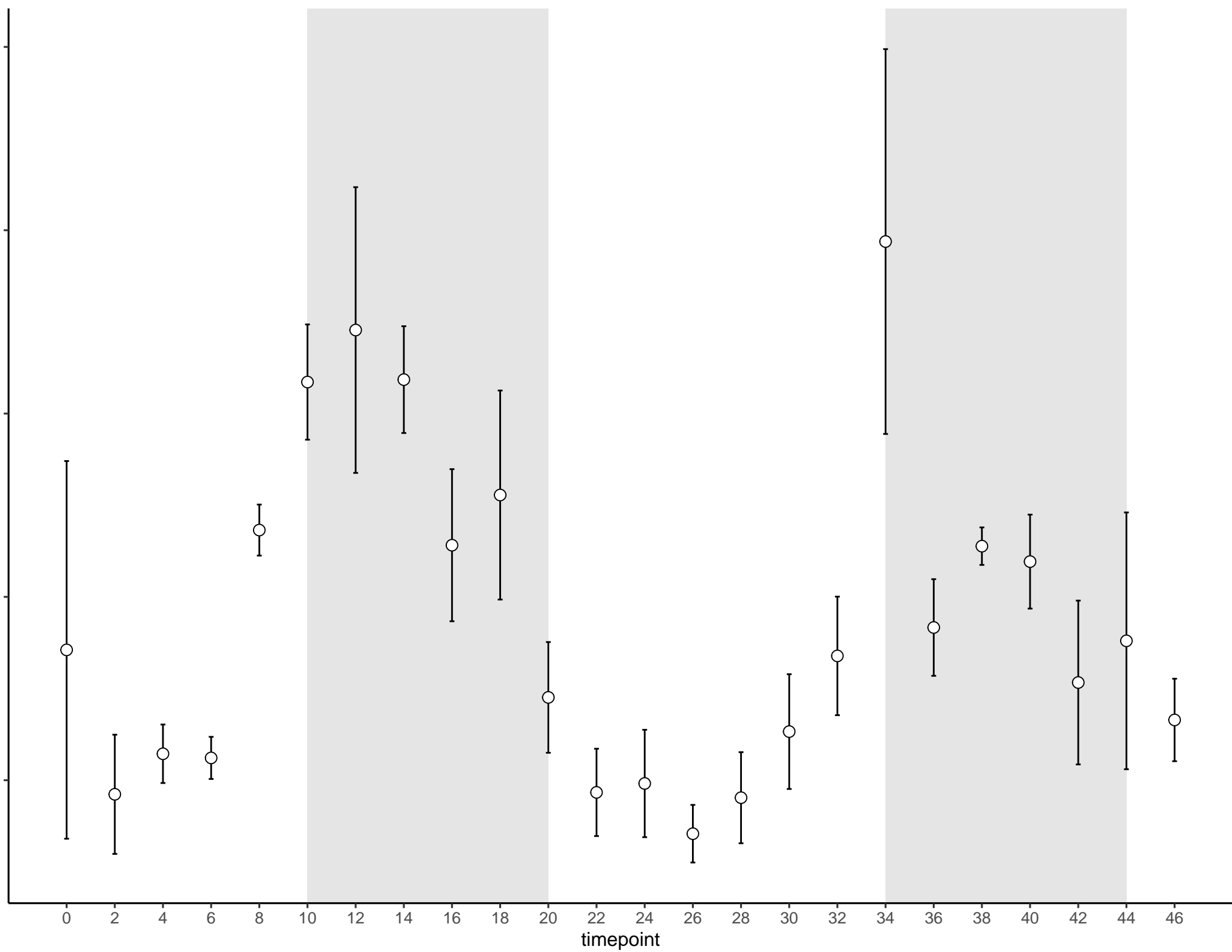
nicotinamide

avg. attomole per cell \pm sdev

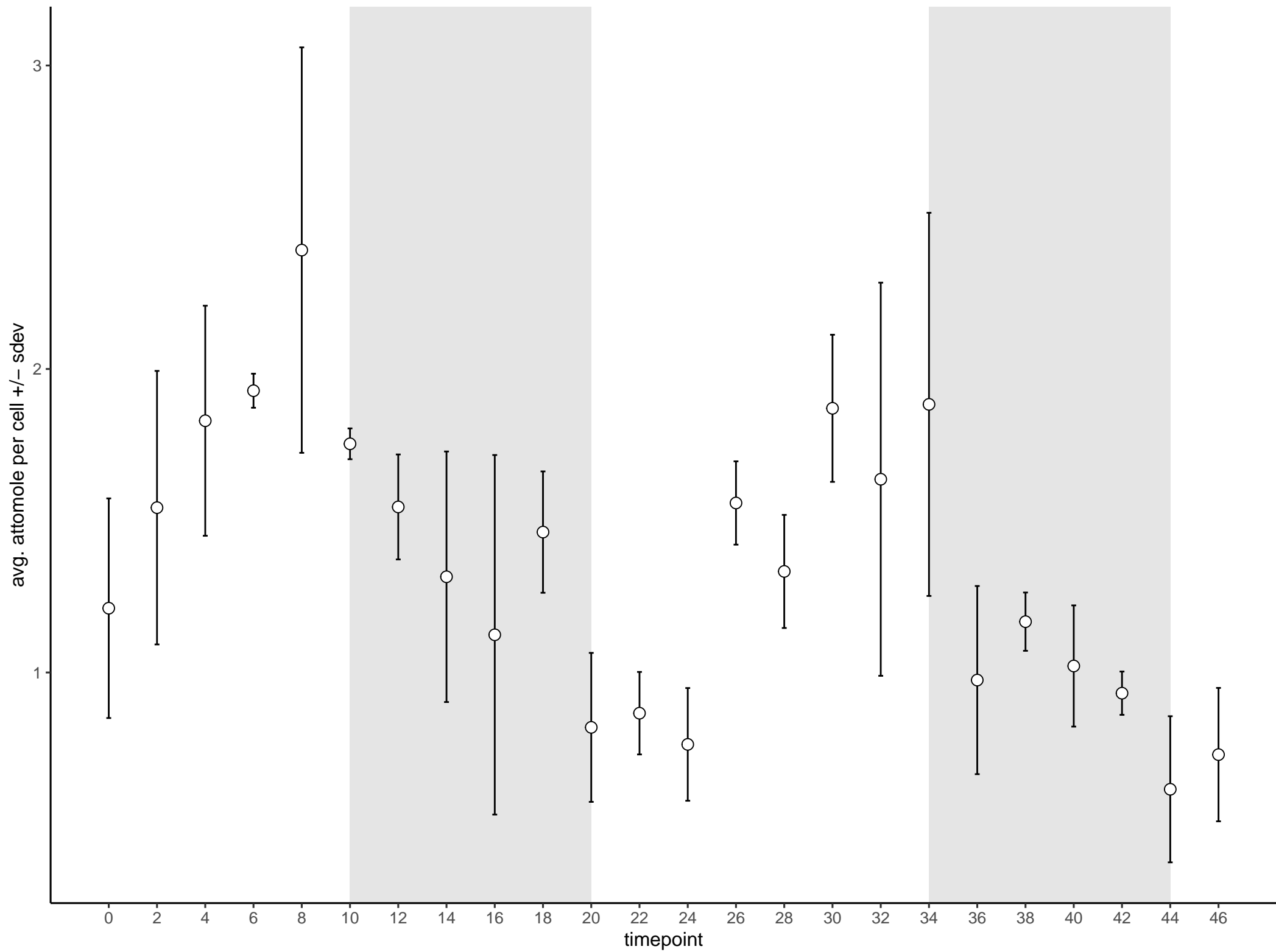


thymidine

avg. attomole per cell \pm sdev



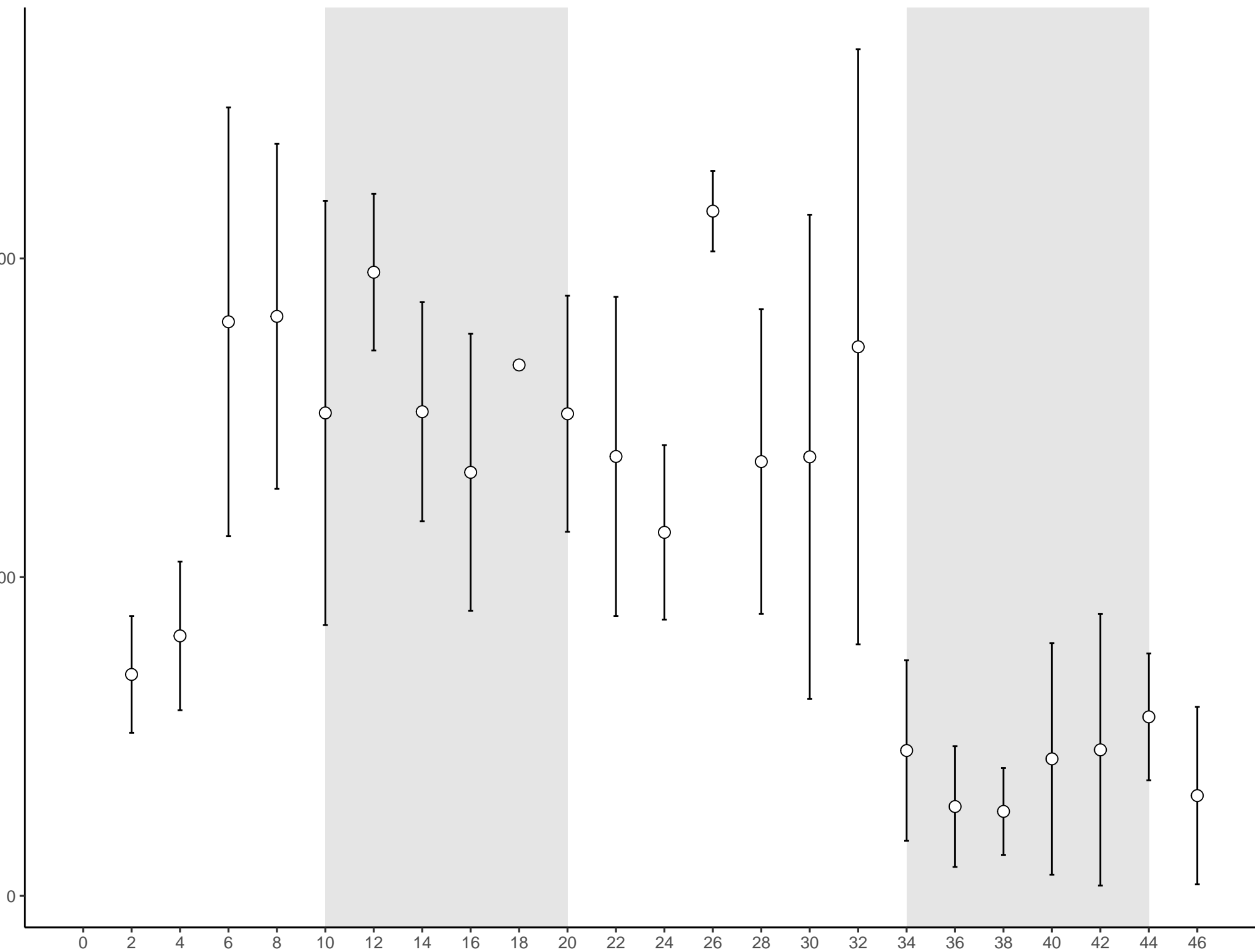
tryptophan



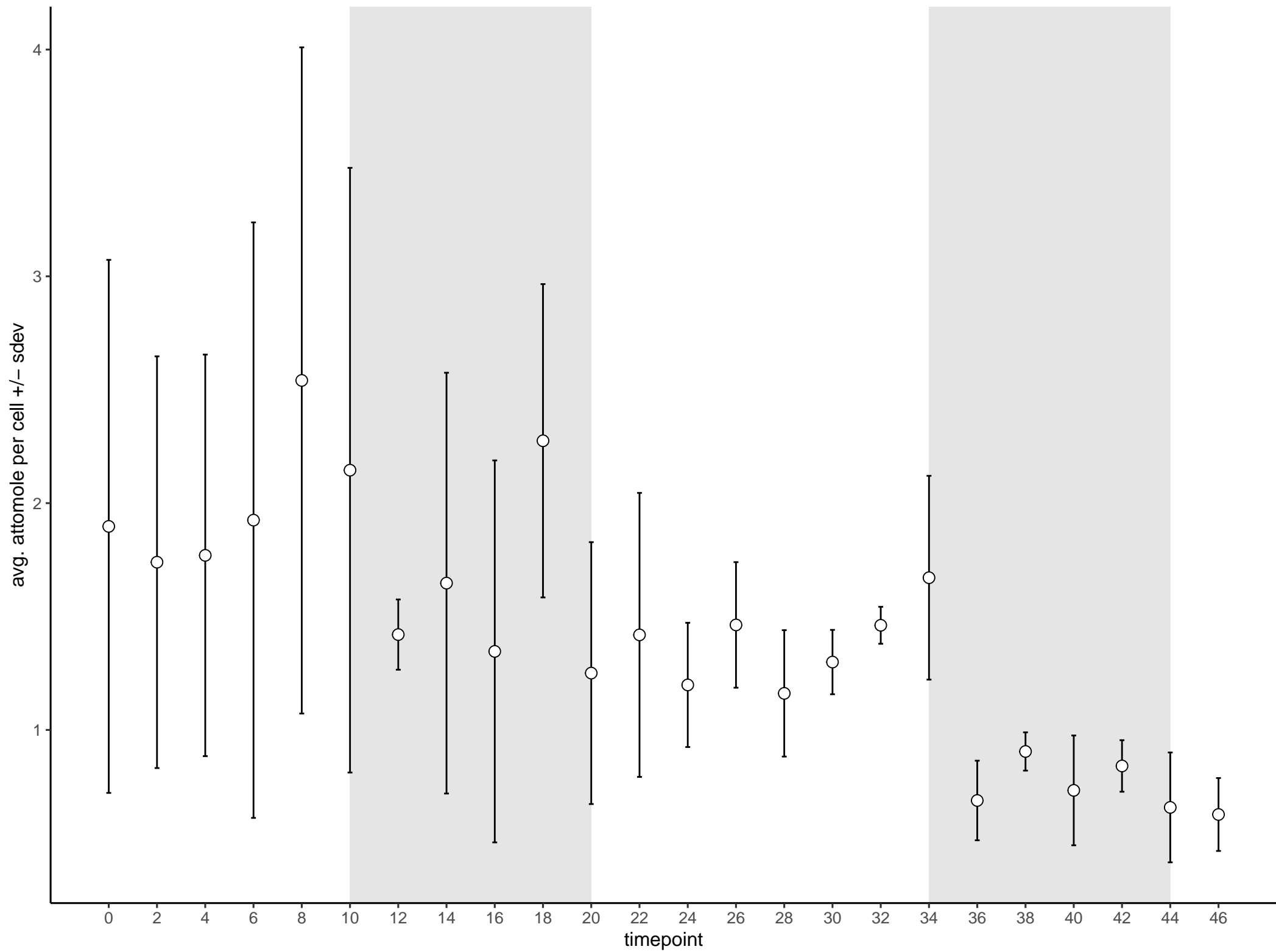
T_90to62

avg. attomole per cell \pm sdev

timepoint



lumichrome



tetrahydrobiopterin240

avg. attomole per cell \pm sdev

60

40

20

0

0

2

4

6

8

10

12

14

16

18

20

22

24

26

28

30

32

34

36

38

40

42

44

46

timepoint

