Effect of feeding level during the prepubertal phase on mammary gland development in female goat kids

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SUPPLEMENTARY FILE

Table 1: List of antibodies used for Western Blotting and immunofluorescence analyses.

Antigen	**Antibody**	**Manufacturer**	**Reference**	**Dilution (Application)**
CK18	Mouse (clone NCH38)	Sigma-Aldrich	C8541-.2ML	(WB)
CK19	Mouse (clone b170)	Leica Biosystems	NCL-CK19	(WB)
E-cadherin (CDH1)	Mouse (clone CY-90)	Dako	M3612	(WB)
PCNA	Monoclonal Mouse (clone PC10)	Dako	M0879	(WB)
Ki67	Rabbit polyclonal	Abcam	ab15580	1/100 (IF)
Isotype control	Goat Anti-rabbit IgG (H+L), F(ab')2 Fragment	Cell Signaling Technology	#4413S	1/400

Figure S1: Experimental design

Figure S2: Section of parenchyma before puberty and at midgestation in goat kids fed a low (L), control (C) or high (H) level of concentrate between weaning (30 days of age) and 235 days of age. Hematoxylin and Eosin staining. magnification 5

A: Prepubertal goat from L group, **B**: Prepubertal goat from C group, **C**: Prepubertal goat from H group, **D**: Midgestation goat from L group, **E**: Midgestation goat from C group, **F**: Midgestation goat from H group

*Secretion

Figure 3: Plasma level of prolactin (ng/ml) before puberty and at midgestation in goats fed a low (L), control (C) or high (H) level of concentrate between weaning (30 days of age) and 235 days of age.

$^{a–b}$ Averages within the same line with different superscripts are significantly different ($P < 0.05$).

Figure 4: Proportion of cells $Ki67^{+}$ before puberty and at midgestation in goats fed a low (L), control (C) or high (H) level of concentrate between weaning (30 days of age) and 235 days of age.

A: Cells expressing Ki67 (red) in parenchyma of prepubertal goat; **B**: Proportion of Ki67 positive cells in parenchyma before puberty; **C**: Cells expressing Ki67 (red) in parenchyma of goat at midgestation; **D**: Proportion of Ki67 positive cells in parenchyma at midgestation

Figure 5: Plasma level of IGF-I (ng/ml) before puberty and at midgestation in goats fed a low (L), control (C) or high (H) level of concentrate between weaning (30 days of age) and 235 days of age.

$^{a–b}$ Averages within the same line with different superscripts are significantly different ($P < 0.05$).

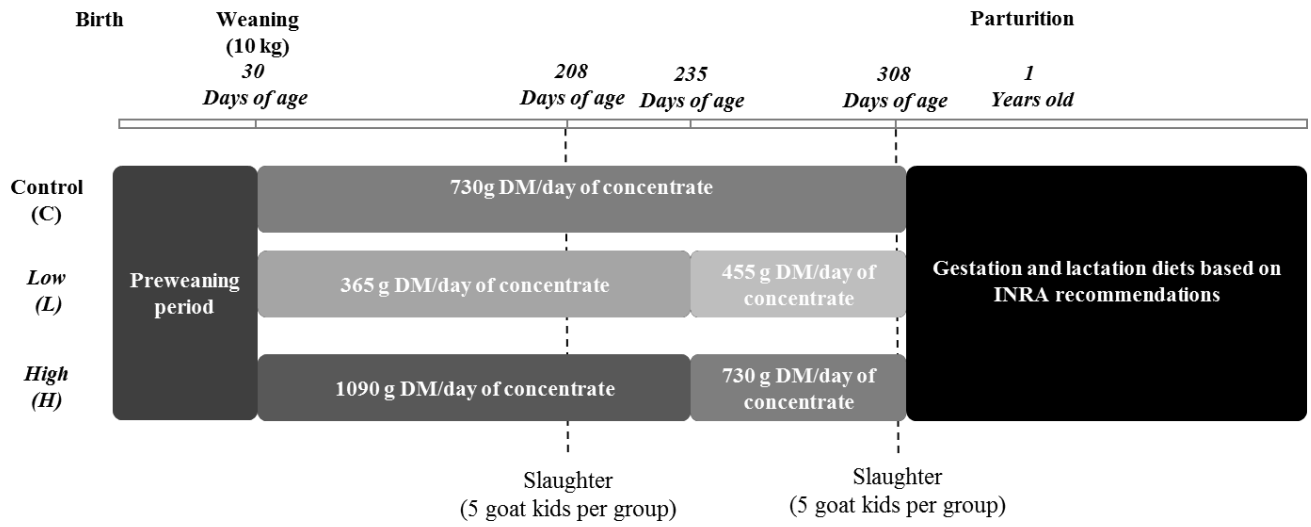
Birth
Weaning
(10 kg)
30
Days of age
208
Days of age
235
Days of age
308
Days of age
Parturition
1
Years old
Control
(C)
Low
(L)
High
(H)
Preweaning
period
730g DM/day of concentrate
365 g DM/day of concentrate
455 g DM/day of concentrate
1090 g DM/day of concentrate
730 g DM/day of concentrate
Gestation and lactation diets based on INRA recommendations
Slaughter
(5 goat kids per group)
Slaughter
(5 goat kids per group)

Figure S1

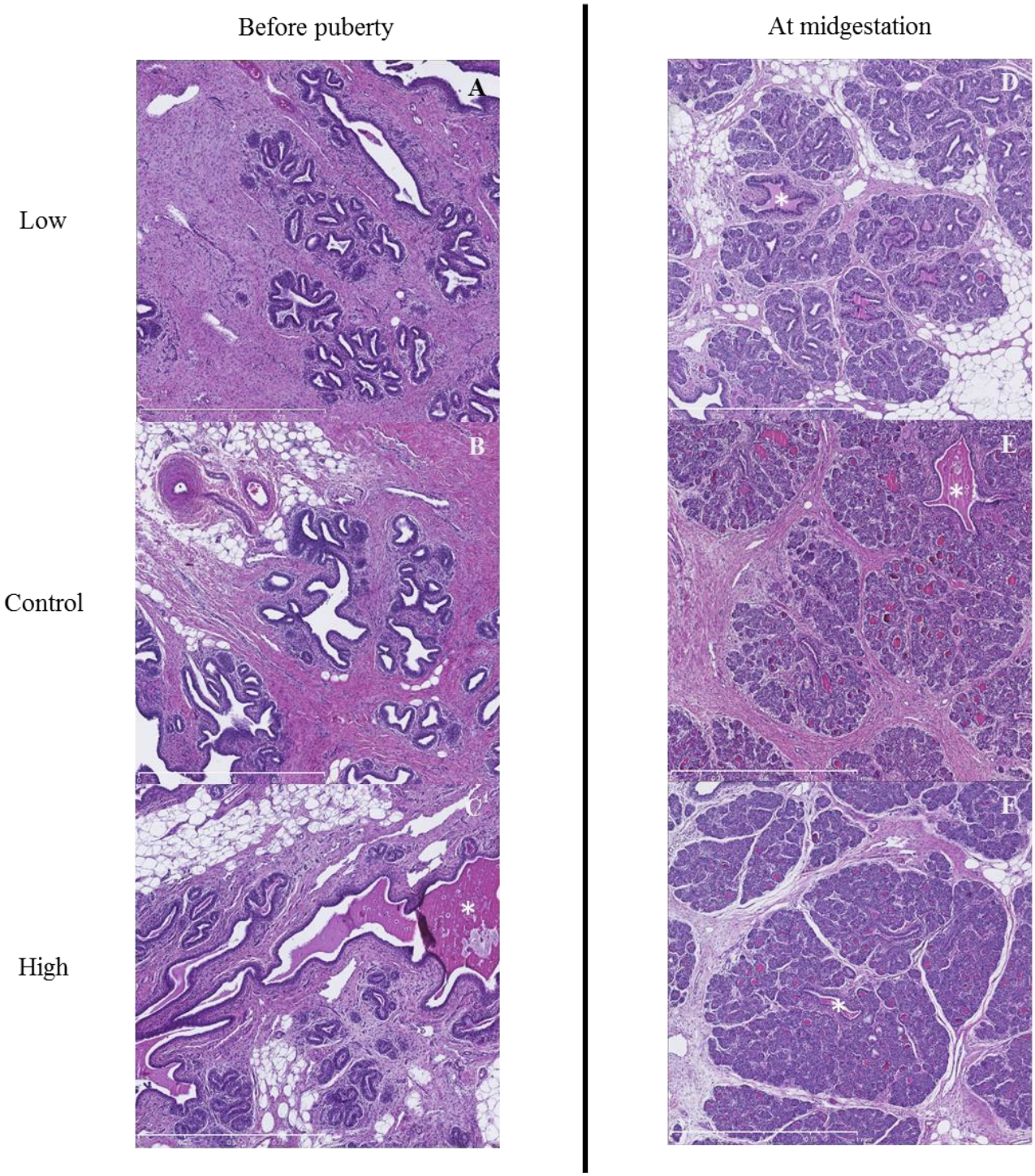

Figure S2

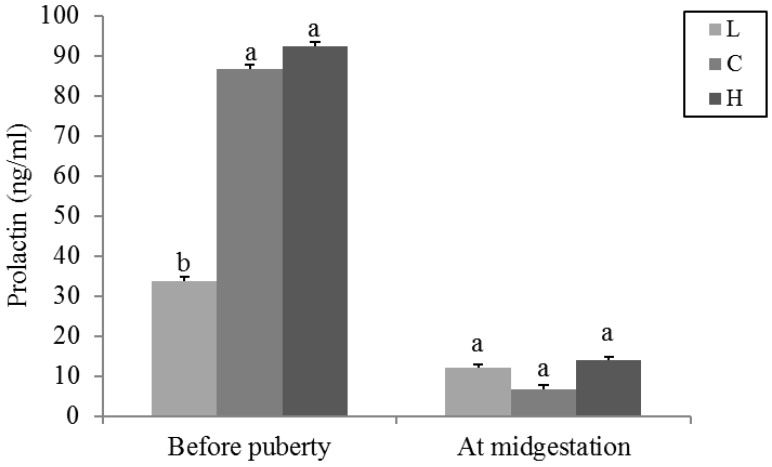
100
90
80
70
60
50
40
30
20
10
0
Prolactin (ng/ml)
b
a
a
a
a
a
L
C
H
Before puberty
At midgestation

Figure S3

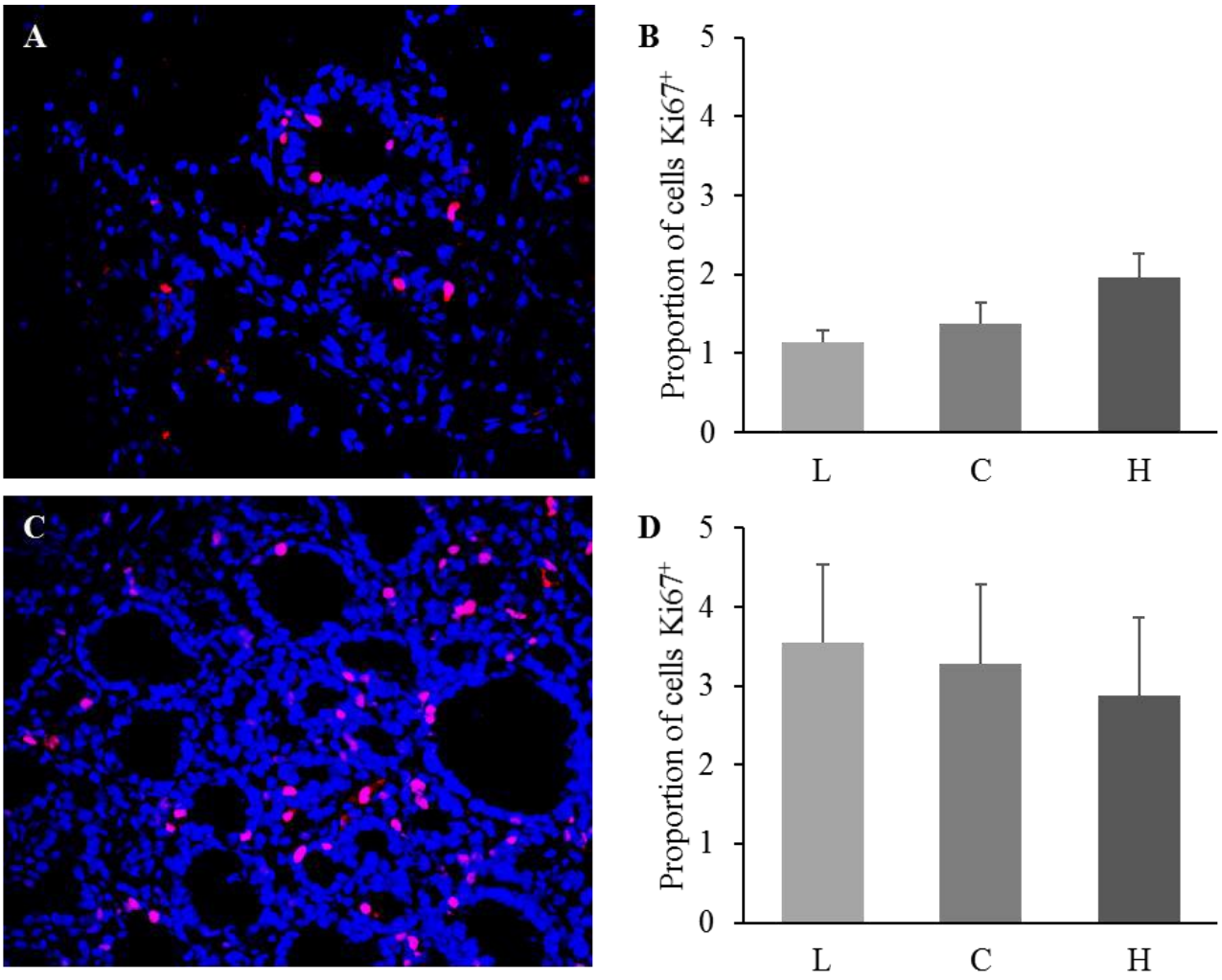
A
B
Proportion of cells Ki67+
5
4
3
2
1
0
L
C
H
C
D
Proportion of cells Ki67+
5
4
3
2
1
0
L
C
H

Figure S4

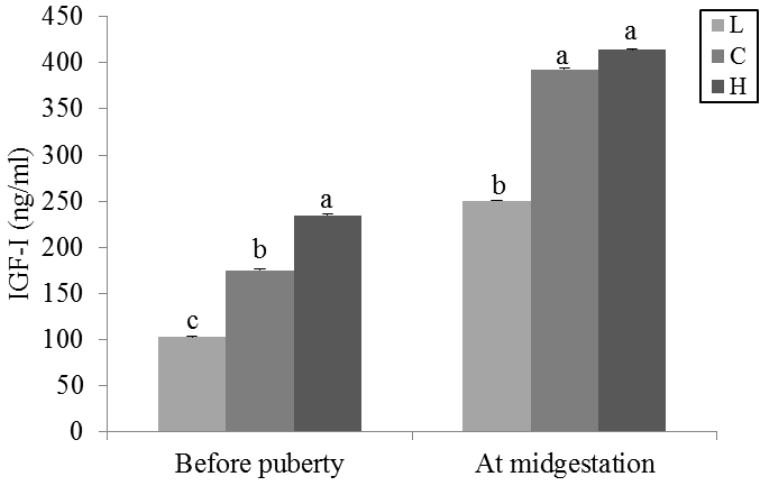
450
400
350
300
250
200
150
100
50
0
IGF-I (ng/ml)
c
b
a
b
a
a
L
C
H
Before puberty
At midgestation

Figure S5