

**Supplementary Table. S1. Antibodies used for this study**

Target	Host	Product code/ fluorophore	Concentration	Dilution
<b>Primary antibody</b>				
SOX9	Rabbit	AB5535 (Merck)	1 mg/ml	1/500
DDX4/MVH	Rabbit	ab13840 (Abcam)	1 mg/ml	1/500
PhosphoH3S10/H3K9me3 (PHH3)	Mouse	ab14955 (Abcam)	1 mg/ml	1/500
<b>Secondary antibody</b>				
Rabbit immunogen	Goat	Alexa Fluor 488	2 mg/ml	1/1000
Rabbit immunogen	Goat	Alexa Fluor 555	2 mg/ml	1/1000
Mouse immunogen	Goat	Alexa Fluor 488	2 mg/ml	1/1000
Mouse immunogen	Goat	Cy3-conjugated	2 mg/ml	1/1000