

## Statistical analysis of variations of HIF/Sima subcellular localization.

**Table 1. Variations in development.** Chi-square ( $\chi^2$ ) test to analyze developmental variations of HIF/Sima subcellular localization at different oxygen concentrations. Proportions of cytoplasmic, ubiquitous and nuclear categories of subcellular localization are compared between embryonic stages 11-12, 13-14, 15 and 16.

% O <sub>2</sub>	<i>P</i>	$\chi^2$ ; df=6	Statistically significant ( $\alpha=0.05$ )
21	<10 <sup>-4</sup>	87.3	+
5	<10 <sup>-4</sup>	88.3	+
3	<10 <sup>-4</sup>	124.9	+
1	<10 <sup>-4</sup>	38.7	+

$\chi^2$  values. *P*, P-value. df, degrees of freedom.

**Table 2. Effect of oxygen levels.** Chi-square ( $\chi^2$ ) test to analyze oxygen-dependent variations of HIF/Sima subcellular localization at different embryonic stages. Proportions of cytoplasmic, ubiquitous and nuclear categories of subcellular localization are compared between 21% O<sub>2</sub>, 5% O<sub>2</sub>, 3% O<sub>2</sub> and 1% O<sub>2</sub>.

Stages	<i>P</i>	$\chi^2$ ; df=6	Statistically significant ( $\alpha=0.05$ )
11-12	<10 <sup>-4</sup>	234.9	+
13-14	<10 <sup>-4</sup>	81.3	+
15	<10 <sup>-4</sup>	88.2	+
16	<10 <sup>-4</sup>	93.9	+

$\chi^2$ , chi-square values. *P*, P-value. df, degrees of freedom.

**Table 3. Effect of the over-expression of dAKT.** Chi-square ( $\chi^2$ ) test to analyze differences of HIF/Sima subcellular localization between wild type embryos and embryos over-expressing dAKT. Proportions of cytoplasmic, ubiquitous and nuclear categories of subcellular localization are compared at different embryonic stages.

Stages	<i>P</i>	$\chi^2$ ; df=2	Statistically significant ( $\alpha=0.05$ )
11-12	0.09	4.8	-
13-14	0.2	3.2	-
15	<10 <sup>-4</sup>	23.6	+
16	<10 <sup>-4</sup>	21.1	+

$\chi^2$ , chi-square values. *P*, P-value. df, degrees of freedom.

**Table 4: Effect of the overexpression of dAKT and dPDK1.** Chi-square ( $\chi^2$ ) test to analyze differences of HIF/Sima subcellular localization between embryos over-expressing dAKT and embryos over-expressing both dAKT and dPDK1. Proportions of cytoplasmic, ubiquitous and nuclear categories of subcellular localization are compared at different embryonic stages.

Stages	<i>P</i>	$\chi^2$ ; df=2	Statistically significant ( $\alpha=0.05$ )
11-12	0.08	5	-
13-14	<10 <sup>-4</sup>	35.6	+
15	0.01	7.9	+
16	0.3	2.4	-

$\chi^2$ , chi-square values. *P*, P-value. df, degrees of freedom.

**Table 5: Effect of PTEN loss of function.** Chi-square ( $\chi^2$ ) test to analyze differences of HIF/Sima subcellular localization between wild type embryos and  $PTEN^{2L117}$  homozygous mutant embryos. Proportions of cytoplasmic, ubiquitous and nuclear categories of subcellular localization are compared at different embryonic stages.

Stages	<i>P</i>	$\chi^2$ ; df=2	Statistically significant ( $\alpha=0.05$ )
11-12	0.07	5	-
13-14	$2 \cdot 10^{-4}$	16.7	+
15	$<10^{-4}$	24.6	+
16	$<10^{-4}$	30.7	+

$\chi^2$ , chi-square values. *P*, P-value. df, degrees of freedom.