

**Table 1. Forward and reverse primers designed for the selected genes with the product length in base pairs (bp) and melting temperature in degrees Celsius.**

<b>Gene</b>	<b>Sequence (5'-3')</b>	<b>Product length (bp)</b>	<b>Tm(°C)</b>
<i>GAPDH</i>	Forward-GCACAGTCAAGGCAGAGAAC	109	54
	Reverse-TACTCAGCACCAGCATCACC		
<i>SDHA</i>	Forward-CTGCAGAACCTGATGCTTTGTG	188	55
	Rverse-ACGTAGGAGAGCGTGTGCTT		

**Table 2 shows the spectrophotometry readings of all the samples of different protocols**

<b>Number of Oocytes</b>	<b>Method of RNA extraction</b>	<b>Purity 260/280nm</b>	<b>Concentration ng/μl</b>
<b>8</b>	<b>Modified trizol protocol</b>	<b>1.50</b>	<b>185</b>
<b>28</b>	<b>Guanidinium thiocyanate protocol</b>	<b>1.175</b>	<b>188</b>
<b>47</b>	<b>Guanidinium thiocyanate protocol</b>	<b>1.25</b>	<b>418</b>
<b>57</b>	<b>Guanidinium thiocyanate protocol</b>	<b>1.10</b>	<b>237</b>
<b>12 embryos+2 cells</b>	<b>Guanidinium thiocyanate protocol</b>	<b>1.170</b>	<b>426</b>
<b>15 embryos+2 cells</b>	<b>Guanidinium thiocyanate protocol</b>	<b>1.36</b>	<b>498</b>
<b>4 expended blastocysis</b>	<b>Guanidinium thiocyanate protocol</b>	<b>1.23</b>	<b>474</b>
<b>3 young blastocysis</b>	<b>Guanidinium thiocyanate protocol</b>	<b>1.05</b>	<b>328</b>
<b>15 embryos + 8 cells</b>	<b>Guanidinium thiocyanate protocol</b>	<b>1.28</b>	<b>491</b>
<b>16 blocked zygote</b>	<b>Guanidinium thiocyanate protocol</b>	<b>1.14</b>	<b>423</b>
<b>21</b>	<b>Trizol protocol</b>	<b>1.11</b>	<b>348</b>
<b>20</b>	<b>Trizol protocol</b>	<b>1.10</b>	<b>360</b>
<b>20</b>	<b>Trizol protocol</b>	<b>1.17</b>	<b>374</b>
<b>20</b>	<b>Trizol protocol</b>	<b>1.11</b>	<b>205</b>
<b>11</b>	<b>Trizol protocol</b>	<b>1.26</b>	<b>375</b>
<b>28</b>	<b>Trizol protocol</b>	<b>1.16</b>	<b>124</b>
<b>68</b>	<b>Modified Trizol protocol</b>	<b>1.50</b>	<b>199.2</b>
<b>15</b>	<b>Modified Trizol protocol</b>	<b>1.73</b>	<b>79.2</b>

<b>30</b>	<b>Modified Trizol protocol</b>	<b>1.22</b>	<b>187</b>
<b>25</b>	<b>Kit protocol (Pure link)</b>	<b>2.127</b>	<b>26.8</b>
<b>11</b>	<b>Kit protocol (Pure link)</b>	<b>2.629</b>	<b>24.4</b>
<b>25</b>	<b>Kit protocol (Pure link)</b>	<b>2.053</b>	<b>31.2</b>
<b>43</b>	<b>Modified Trizol protocol</b>	<b>1.66</b>	<b>14.8</b>
<b>40</b>	<b>Modified Trizol protocol</b>	<b>1.77</b>	<b>11.0</b>
<b>11</b>	<b>Modified Trizol protocol</b>	<b>1.56</b>	<b>19.2</b>
<b>27 Vitrified PROH</b>	<b>Kit protocol (Pure link)</b>	<b>2.076</b>	<b>24.0</b>
<b>30 Vitrified DMSO</b>	<b>Kit protocol (Pure link)</b>	<b>2.27</b>	<b>21.2</b>
<b>Granulose PROH</b>	<b>Kit protocol (Pure link)</b>	<b>2.098</b>	<b>34.4</b>
<b>Granulose DMSO</b>	<b>Kit protocol (Pure link)</b>	<b>2.065</b>	<b>38.0</b>
<b>Granulose</b>	<b>Modified Trizol protocol</b>	<b>1.50</b>	<b>4978</b>
<b>Granulose PROH</b>	<b>Modified Trizol protocol</b>	<b>1.648</b>	<b>71.2</b>
<b>26 oocytes PROH</b>	<b>Modified Trizol protocol</b>	<b>1.757</b>	<b>26.0</b>
<b>27 oocytes PROH</b>	<b>Modified Trizol protocol</b>	<b>1.47</b>	<b>48.8</b>
<b>Granulose DMSO</b>	<b>Modified Trizol protocol</b>	<b>2.11</b>	<b>30.4</b>
<b>22 oocytes DMSO</b>	<b>Modified Trizol protocol</b>	<b>1.928</b>	<b>17.2</b>
<b>23 oocytes DMSO</b>	<b>Modified Trizol protocol</b>	<b>2.11</b>	<b>10.5</b>
<b>28</b>	<b>Modified Trizol protocol</b>	<b>1.50</b>	<b>152.8</b>
<b>30</b>	<b>Modified Trizol protocol</b>	<b>1.60</b>	<b>30.4</b>
<b>28 oocytes granulosa</b>	<b>Modified Trizol protocol</b>	<b>1.50</b>	<b>67.6</b>
<b>30 oocytes granulosa</b>	<b>Modified Trizol protocol</b>	<b>1.50</b>	<b>106.8</b>
<b>28 PROH</b>	<b>Modified Trizol protocol</b>	<b>1.60</b>	<b>84</b>
<b>Granulosa PROH</b>	<b>Modified Trizol protocol</b>	<b>1.50</b>	<b>186</b>
<b>DMSO 15</b>	<b>Modified Trizol protocol</b>	<b>1.50</b>	<b>32.4</b>
<b>DMSO 20</b>	<b>Modified Trizol protocol</b>	<b>1.61</b>	<b>40</b>

<b>DMSO 20</b>	<b>Modified Trizol protocol</b>	<b>1.50</b>	<b>329.2</b>
<b>Granulosa DMSO</b>	<b>Modified Trizol protocol</b>	<b>1.50</b>	<b>67.6</b>

**Table 3. Efficiency of three protocols in the three conditions studied.**

<b>RNA extraction Protocols</b>	<b>Modified Trizol protocol</b>	<b>GNTC protocol</b>	<b>Commercial kit protocol</b>
Cost	<b>1.97 euro per sample</b>	<b>2.0 euro per sample</b>	<b>5.2 euro per sample</b>
Time consuming	2 -3hours	6-8 hours	1-2 hours
Safety	Less biohazardous	More biohazardous	Less biohazardous
Efficiency(ng/μl)	Very good	Good	Very good
Specificity of bands	Bright and specific bands are observed	Specific band are observed but light	More non-specific bands are observed