

Physicochemical properties of COL gene family in *Nicotiana tabacum*

Name	ID	Gene Length	Protein Length	Molecular Weight	pI	Formula	Instability index	Aliphatic index	GRAVY
<i>NitabCOL05</i>	Nitab4.5_0001212g0030.1	1606	384	42380.8	6.42	C <sub>1847</sub> H <sub>2891</sub> N <sub>521</sub> O <sub>578</sub> S <sub>23</sub>	42.51	70.89	-0.301
<i>NitabCOL02a</i>	Nitab4.5_0001982g0010.1	2052	403	44755.71	5.52	C <sub>1925</sub> H <sub>3006</sub> N <sub>564</sub> O <sub>627</sub> S <sub>21</sub>	43.28	66.85	-0.644
<i>NitabCOL04a</i>	Nitab4.5_0001110g0140.1	1334	341	37974.51	5.83	C <sub>1647</sub> H <sub>2564</sub> N <sub>470</sub> O <sub>524</sub> S <sub>20</sub>	52.22	66.95	-0.509
<i>NitabCOL04b</i>	Nitab4.5_0002912g0030.1	1430	355	39470.18	5.73	C <sub>1712</sub> H <sub>2666</sub> N <sub>484</sub> O <sub>548</sub> S <sub>21</sub>	50.97	67.89	-0.464
<i>NitabCOL13a</i>	Nitab4.5_0009550g0010.1	2827	372	41666.3	5.3	C <sub>1789</sub> H <sub>2776</sub> N <sub>520</sub> O <sub>583</sub> S <sub>24</sub>	55.57	61.37	-0.652
<i>NitabCOL02b</i>	Nitab4.5_0013739g0010.1	2056	406	44973.9	5.78	C <sub>1934</sub> H <sub>3004</sub> N <sub>572</sub> O <sub>625</sub> S <sub>22</sub>	43.76	63.72	-0.665
<i>NitabCOL10</i>	Nitab4.5_0004941g0040.1	3292	381	41787.32	5.08	C <sub>1762</sub> H <sub>2783</sub> N <sub>517</sub> O <sub>603</sub> S <sub>29</sub>	58.37	60.68	-0.564
<i>NitabCOL16a</i>	Nitab4.5_0000057g0280.1	2120	379	43283.54	5.59	C <sub>1863</sub> H <sub>2949</sub> N <sub>547</sub> O <sub>598</sub> S <sub>22</sub>	41.76	67.12	-0.79
<i>NitabCOL16b</i>	Nitab4.5_0000874g0020.1	2138	440	50204.22	5.08	C <sub>2157</sub> H <sub>3420</sub> N <sub>626</sub> O <sub>703</sub> S <sub>26</sub>	45.92	67.55	-0.795
<i>NitabCOL14</i>	Nitab4.5_0008442g0020.1	3361	473	51997.34	7.79	C <sub>2216</sub> H <sub>3533</sub> N <sub>661</sub> O <sub>721</sub> S <sub>32</sub>	46.23	64.33	-0.663
<i>NitabCOL16c</i>	Nitab4.5_0000974g0020.1	2492	420	47672.21	5.07	C <sub>2057</sub> H <sub>3237</sub> N <sub>599</sub> O <sub>665</sub> S <sub>21</sub>	56.37	64.07	-0.755
<i>NitabCOL04c</i>	Nitab4.5_0013324g0010.1	2126	336	37442.9	5.96	C <sub>1618</sub> H <sub>2531</sub> N <sub>465</sub> O <sub>519</sub> S <sub>20</sub>	52.68	65.06	-0.532
<i>NitabCOL04d</i>	Nitab4.5_0000989g0080.1	2096	336	37476.91	5.77	C <sub>1622</sub> H <sub>2529</sub> N <sub>463</sub> O <sub>520</sub> S <sub>20</sub>	51.22	63.9	-0.542
<i>NitabCOL13b</i>	Nitab4.5_0000824g0040.1	3993	373	41764.53	5.37	C <sub>1797</sub> H <sub>2794</sub> N <sub>520</sub> O <sub>582</sub> S <sub>24</sub>	54.56	61.98	-0.655
<i>NitabCOL16d</i>	Nitab4.5_0009734g0010.1	2654	417	47266.65	5.07	C <sub>2035</sub> H <sub>3206</sub> N <sub>598</sub> O <sub>661</sub> S <sub>20</sub>	58.1	63.17	-0.789