

Targeting orphan G Protein–Coupled Receptor 17 with T0 ligand impairs glioblastoma growth

Phuong Doan^{1,2,3#}, Phung Nguyen^{1,2,3#}, Akshaya Murugesan^{1,2,3}, Kumar Subramanian^{1,2,3}, Saravanan Konda Mani⁴, Vignesh Kalimuthu⁵, Bobin George Abraham⁶, Brett Stringer⁷, Kadalmani Balamuthu⁵, Olli Yli-Harja^{8,9} and Meenakshisundaram Kandhavelu^{1,2,9,*}

¹ Molecular Signaling Lab, Faculty of Medicine and Health Technology, Tampere University, P.O. Box 553, 33101 Tampere, Finland

² BioMediTech Institute and Faculty of Medicine and Health Technology, Tampere University, Arvo Ylpön katu 34, 33520 Tampere, Finland

³ Department of Biotechnology, Lady Doak College, Thallakulam, Madurai – 625002, India

⁴ Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, Shenzhen, Guangdong, China

⁵ Department of Animal Science, Bharathidasan University, Tiruchirappalli-620024, India

⁶ Faculty of Medicine and Health Technology, Tampere University, P.O. Box 553, 33101 Tampere, Finland

⁷ College of Medicine and Public Health, Flinders University, Sturt Rd, Bedford Park South, 5042, Australia

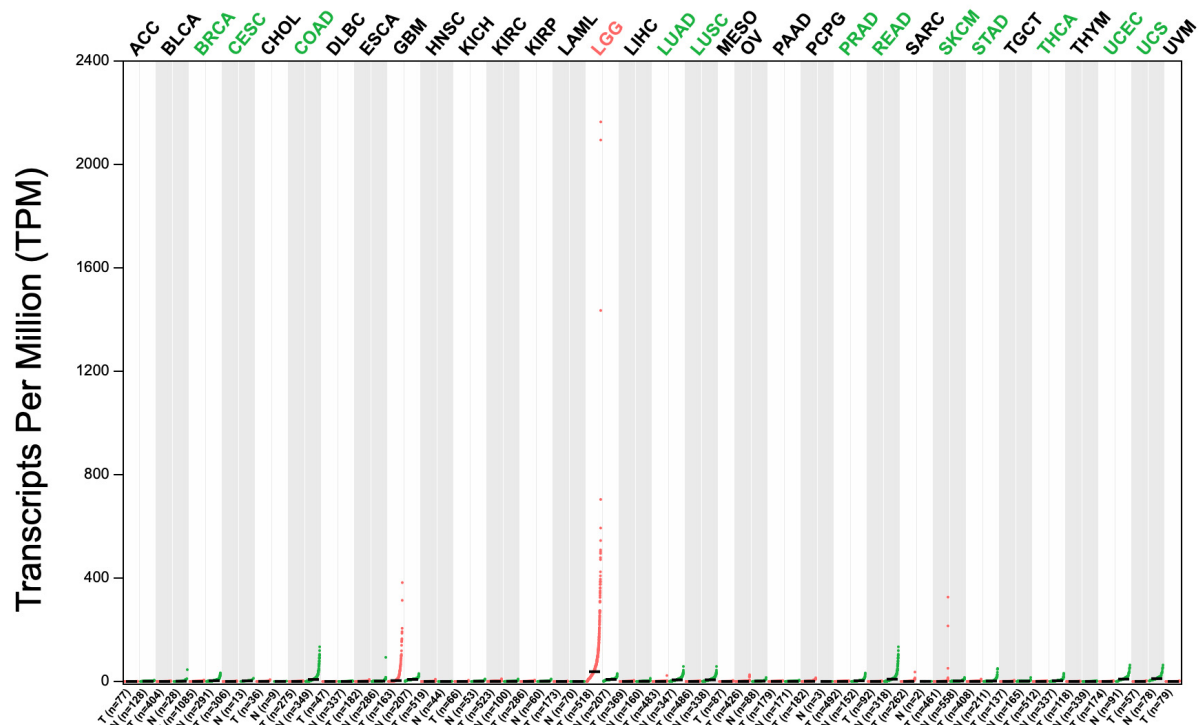
⁸ Computational Systems Biology Group, Faculty of Medicine and Health Technology, Tampere University, P.O. Box 553, 33101 Tampere, Finland

⁹ Institute for Systems Biology, 1441N 34th Street, Seattle, WA, USA

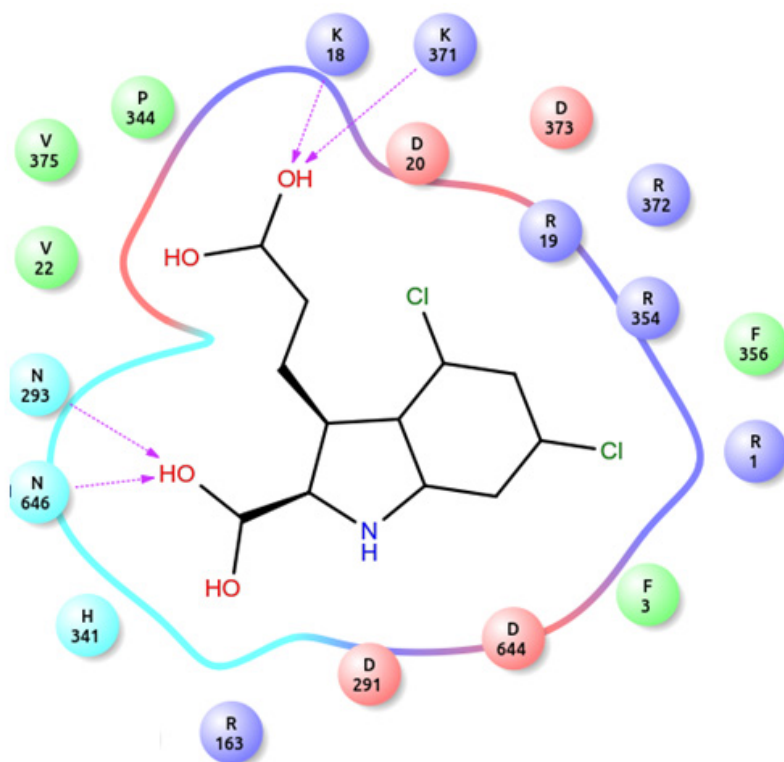
* Correspondence: meenakshisundaram.kandhavelu@tuni.fi; Tel.: (+358)417488772

Equal Contribution

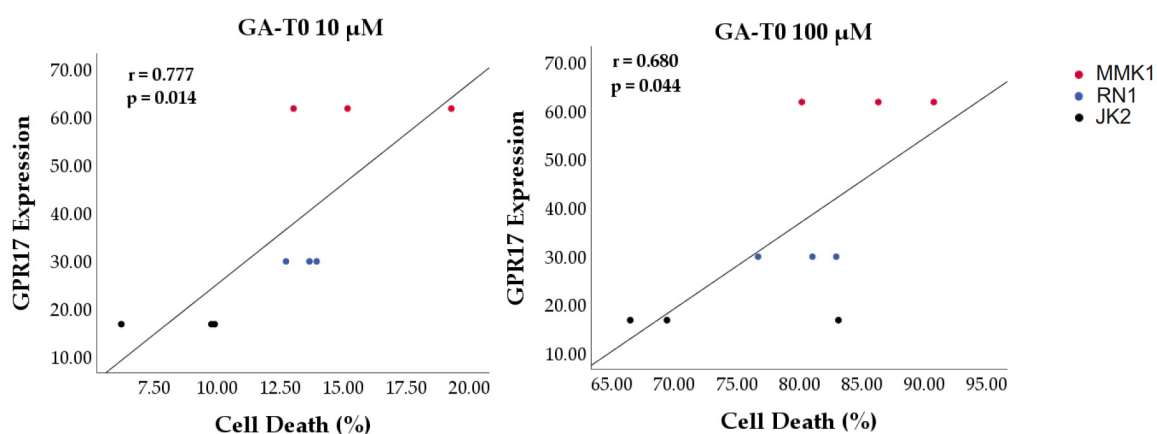
Supplementary Figure 1



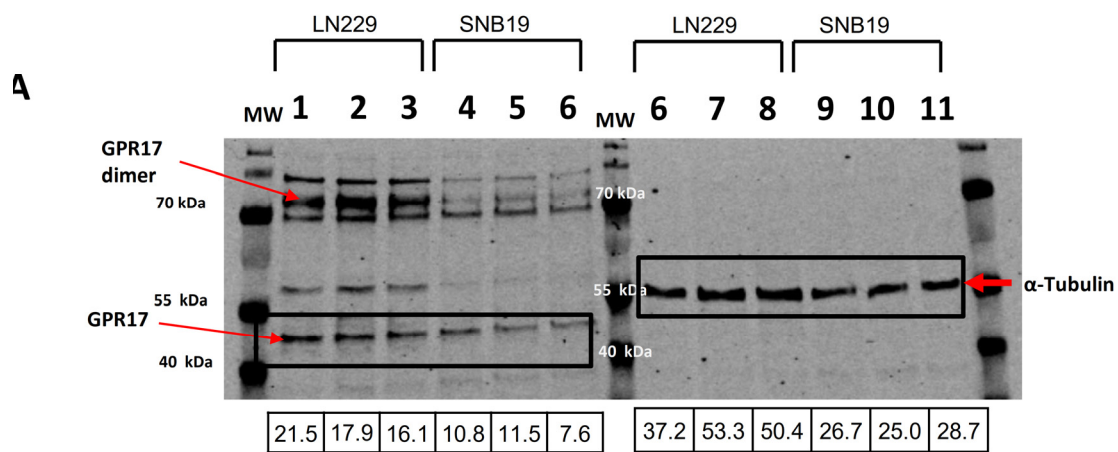
Supplementary Figure 1: *GPR17* expression profile across all tumor samples and paired normal tissues. Dots represent expression in individual samples.



Supplementary Figure 2. Two-dimensional interaction diagram for MDL 29,951-protein complex.



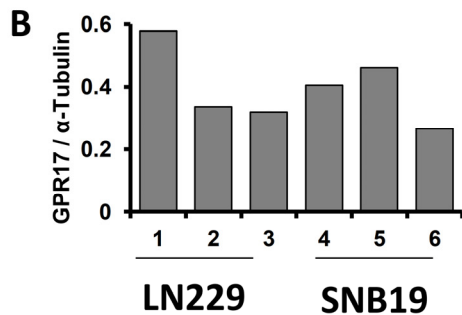
Supplementary Figure 3. Correlation between GPR17 expression and percentage of cell death in three Patient derived cell lines treated with 100 µM and 10 µM of GA-T0. Spearman's (p) and Pearson's (r) correlation between the two values are shown.



Signal / intensity ratio from the above western blot

	LN229			SNB19			
GPR17	21.5	17.9	16.1	10.8	11.5	7.6	
α -tubulin/ GPR17	1.7	3.0	3.1	2.5	2.2	3.8	

	LN229			SNB19			
	37.2	53.3	50.4	26.7	25.0	28.7	α -tubulin



Supplementary Figure 4: A) Western blot analysis of GPR17 receptor protein expression in LN229 and SNB19 cells. MW: Molecular weight standard; Lane 1-3: LN229 triplicates; Lane 4-6: SNB19 triplicates; α -Tubulin as a loading control: Lane 6-8 for LN229 triplicates and Lane 9-11 for SNB19 triplicates. The figure also shows the densitometry readings/intensity ratio of each band. B) Histogram showing the densitometric analysis of GPR17/ α -Tubulin for LN229 (1-3) and SNB19 (4-6) cells.