

Supporting Information

Small Molecule derived pH-Gated Ion Transporters

Narendra Kumar^a and Nandita Madhavan^{b *}

Table S1: Anticancerous activity of different transporters with cancerous cell lines and normal cell lines

CO MP OU NDS	IC ₅₀ (μM) for cancerous cell lines										IC ₅₀ (μM) for normal cell line	
	HeLa	MDA- MB-231	HCT- 116	OVCAR 8	MCF-7	A549	HepG2	HEYA 8 CSCs	SKOV3 CSCs	T-47D	MCF-10A	BHK- 21
8b	-	6.0±1.3	6.1±0. 1	9.2±3. 3	6.1±0. 1	-	-	-	-	-	10.3±3.3	-
9b	-	6.0±2.6	6.1±1. 0	10.5±3 .5	7.1±1. 2	-	-	-	-	-	>50	-
10c	-	-	-	-	26.39	-	-	-	-	27.60	-	50.22
10d	-	-	-	-	29.39	-	-	-	-	28.12	-	52.37
11	-	-	-	-	1.0	-	-	-	-	-	-	-
12b	-	-	-	-	-	95±25	-	-	-	-	-	-
12c	-	-	-	-	-	29±4	-	-	-	-	-	-
27	9.59± 0.56	-	-	-	10.51± 2.57	>50	12.81±2 .17	-	-	-	-	-
32a	12.74 ±3.44	29.20±4 .43	-	-	-	-	-	-	-	-	-	16.27± 2.39
33b	24.82 ±3.56	100.50± 5.49	-	-	-	-	-	-	-	-	-	68.69± 7.42
35b	-	-	-	-	-	-	-	1.5±1.3	0.9±0.1	-	-	-

References

1. Akhtar, N.; Pradhan, N.; Barik, G. K.; Chatterjee, S.; Ghosh, S.; Saha, A.; Satpati, P.; Bhattacharyya, A.; Santra, M. K.; Manna, D., Quinine-based semisynthetic ion transporters with potential antiproliferative activities. *ACS appl. Mater. & Int.* 2020, **12**, 25521-25533.
2. Saha, A.; Akhtar, N.; Kumar, V.; Kumar, S.; Srivastava, H. K.; Kumar, S.; Manna, D., pH-Regulated anion transport activities of bis (iminourea) derivatives across the cell and vesicle membrane. *Org. Biomol. Chem.* 2019, **17**, 5779-5788.
3. Tapia, L.; Pérez, Y.; Bolte, M.; Casas, J.; Solà, J.; Quesada, R.; Alfonso, I., pH-dependent chloride transport by pseudopeptidic cages for the selective killing of cancer cells in acidic microenvironments. *Angew. Chem. Int. Ed.* 2019, **58**, 12465-12468.

4. Wang, Z.-K.; Hong, X.-Q.; Hu, J.; Xing, Y.-Y.; Chen, W.-H., Synthesis and biological activity of squaramido-tethered bisbenzimidazoles as synthetic anion transporters. *RSC Adv.* 2021, **11**, 3972-3980.
5. Biswas, O.; Akhtar, N.; Vashi, Y.; Saha, A.; Kumar, V.; Pal, S.; Kumar, S.; Manna, D., Chloride ion transport by PITENINs across the phospholipid bilayers of vesicles and cells. *ACS Appl. Bio Mater.* 2020, **3**, 935-944.
6. Shen, F.-F.; Dai, S.-Y.; Wong, N.-K.; Deng, S.; Wong, A. S.-T.; Yang, D., Mediating K+/H+ transport on organelle membranes to selectively eradicate cancer stem cells with a small molecule. *J. Am. Chem. Soc.* 2020, **142**, 10769-10779.