## **Supporting Information**

## Dick et al. 10.1073/pnas.1209408109

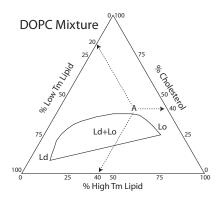


Fig. S1. How to read a phase diagram. The vertices of the triangle represent pure components: 100% cholesterol, 100% low-Tm lipid, and 100% high-Tm lipid. Each side of the triangle represents a binary mixture. This particular phase diagram displays a two-phase coexistence region, Ld + Lo, surrounded by one-phase regions, Ld or Lo, and a three-phase coexistence region also including a gel phase (unlabeled) below. To read a composition, choose any point within the triangle, e.g., point A. From point A, draw three lines toward each binary axis that are parallel to each side of the triangle. The mol % of each component for A is read directly from where the lines intersect with the binary axes. In this example, the composition is 40% high-Tm lipid, 20% low-Tm lipid, and 40% cholesterol.

Table S1. Composition of liposomes in Fig. 3 A, C, and E

| DOPC mixture | % DSPC | % DOPC | % DOPS | % chol |
|--------------|--------|--------|--------|--------|
| Ld-1         | 0      | 40     | 20     | 40     |
| Ld-2         | 5.7    | 34.3   | 20     | 40     |
| Ld-3         | 11.4   | 28.6   | 20     | 40     |
| Ld-4         | 17.1   | 22.9   | 20     | 40     |
| Ld-5         | 22.8   | 17.2   | 20     | 40     |
| Ld-6         | 28.5   | 11.5   | 20     | 40     |
| Ld-7         | 34.2   | 5.8    | 20     | 40     |
| Ld-8         | 40     | 0      | 20     | 40     |

All components of each sample are mol % of total lipids. The DOPC-mixture liposomes Ld-1 to Ld-8 correspond to the triangle symbols in Fig. 3.

Table S2. Composition of liposomes in Fig. 3 A, C, and E

| DOPC mixture | % DSPC | % DOPC | % DPPS | % chol |
|--------------|--------|--------|--------|--------|
| Lo-1         | 0      | 40     | 20     | 40     |
| Lo-2         | 5.8    | 34.2   | 20     | 40     |
| Lo-3         | 11.5   | 28.5   | 20     | 40     |
| Lo-4         | 17.2   | 22.8   | 20     | 40     |
| Lo-5         | 22.9   | 17.1   | 20     | 40     |
| Lo-6         | 28.6   | 11.4   | 20     | 40     |
| Lo-7         | 34.3   | 5.7    | 20     | 40     |
| Lo-8         | 40     | 0      | 20     | 40     |

All components of each sample are mol % of total lipids. The DOPC-mixture liposomes Lo-1 to Lo-8 correspond to the X symbols in Fig. 3.

Table S3. Composition of liposomes in Fig. 3 B, D, and F

| POPC mixture | % DSPC | % POPC | % POPS | % chol |
|--------------|--------|--------|--------|--------|
| Ld-1         | 0      | 38     | 30     | 32     |
| Ld-2         | 5.4    | 32.6   | 30     | 32     |
| Ld-3         | 10.8   | 27.2   | 30     | 32     |
| Ld-4         | 16.2   | 21.8   | 30     | 32     |
| Ld-5         | 21.6   | 16.4   | 30     | 32     |
| Ld-6         | 27     | 11     | 30     | 32     |
| Ld-7         | 32.4   | 5.6    | 30     | 32     |
| Ld-8         | 38     | 0      | 30     | 32     |

All components of each sample are mol % of total lipids. The POPC-mixture liposomes Ld-1 to Ld-8 an correspond to the circle symbols in Fig. 3.

Table S4. Composition of liposomes in Fig. 3 B, D, and F

| POPC mixture | % DSPC | % POPC | % DPPS | % chol |
|--------------|--------|--------|--------|--------|
| Lo-1         | 0      | 38     | 30     | 32     |
| Lo-2         | 5.6    | 32.4   | 30     | 32     |
| Lo-3         | 11     | 27     | 30     | 32     |
| Lo-4         | 16.4   | 21.6   | 30     | 32     |
| Lo-5         | 21.8   | 16.2   | 30     | 32     |
| Lo-6         | 27.2   | 10.8   | 30     | 32     |
| Lo-7         | 32.6   | 5.4    | 30     | 32     |
| Lo-8         | 38     | 0      | 30     | 32     |

All components of each sample are mol % of total lipids. The POPC-mixture liposomes Lo-1 to Lo-8 correspond to the dash symbols in Fig. 3.