

|                       | Proteins | Residue positions | Bits of information |           | Fraction Top 5 (%) | AAD (%) | AUC  | Rank Top |
|-----------------------|----------|-------------------|---------------------|-----------|--------------------|---------|------|----------|
|                       |          |                   | Phage display       | Predicted |                    |         |      |          |
| GB1 ( $kT=0.23$ )     | 1        | 6                 | 1.58                | 4.25      | 70.8               | 7.77    | 0.73 | 6.33     |
| GB1 ( $kT=0.66$ )     | 1        | 6                 | 1.58                | 1.00      | 76.4               | 4.53    | 0.75 | 6.33     |
| hGH/hGHR <sup>1</sup> | 1        | 16                | 1.19                | 3.69      | 52.8               | 7.51    | 0.68 | 7.38     |
| hGH/hGHR <sup>2</sup> | 1        | 35                | 0.89                | 3.56      | 42.0               | 7.81    | 0.62 | 7.86     |
| PDZ/Peptide           | 5        | 25                | 3.11                | 2.82      | 81.0               | 5.61    | 0.84 | 3.36     |

<sup>1</sup>16 designed hGH amino acid positions as defined in [23] and shown in Figure 3.

<sup>2</sup>All designed hGH amino acid positions shown in Figure S4.