

Figure S1 Odds ratios of pairs formed by two small residues at separation 1 to 10. [Small]: Gly, Ala and Ser. Odds ratio = Observed number of occurrences/Expected. The error bars mark the 99% confidence interval around the expectation.

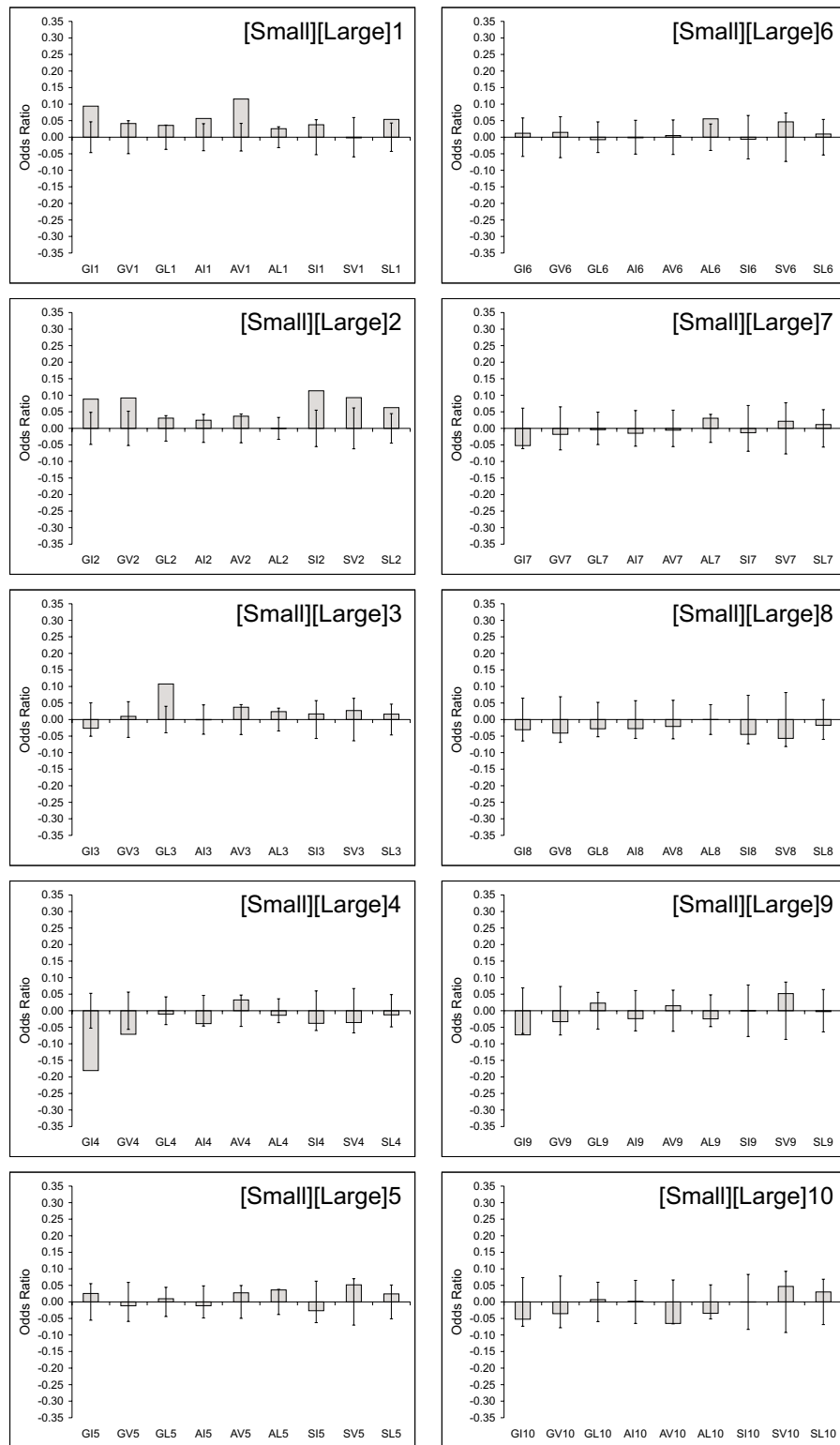


Figure S2 Odds ratios of pairs formed by a small and a large aliphatic residue at separation 1 to 10. [Small]: small residues, Gly, Ala and Ser; [Large]: Ile, Val and Leu. Odds ratio = Observed number of occurrences/Expected. The error bars mark the 99% confidence interval around the expectation.

Reference: Senes A, Gerstein M. and Engelman D.M. "Statistical analysis of amino acid patterns in transmembrane helices: the GxxxG motif occurs frequently and in association with β -branched residues at neighboring positions." *J.Mol.Biol.* (2000), **296(3)**, 921-36.

This figure is provided as supplementary material at <http://engelman.csb.yale.edu/tmstat> and <http://bioinfo.mbb.yale.edu/tmstat>

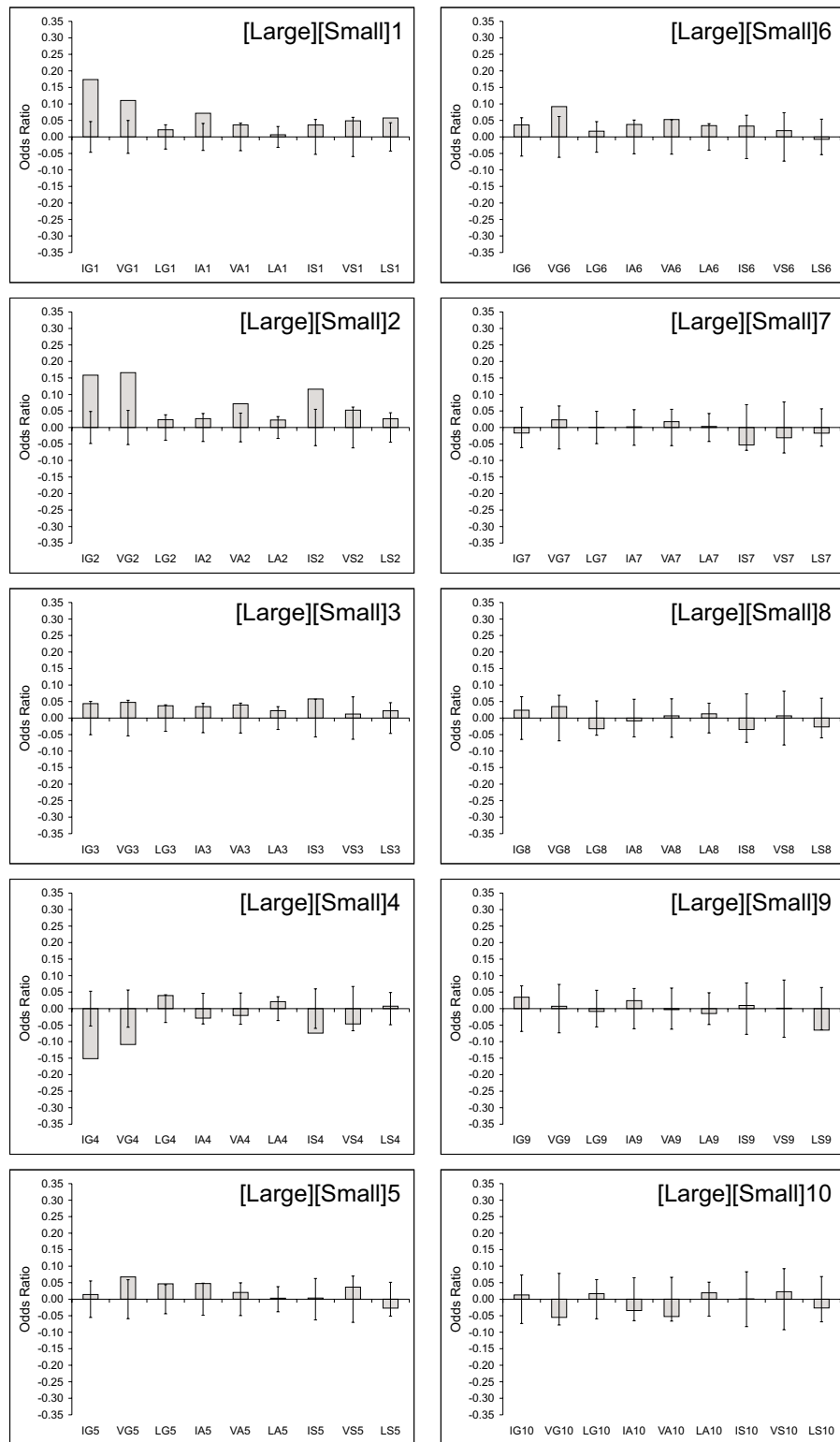


Figure S3 Odds ratios of pairs formed by a large aliphatic and a small residue at separation 1 to 10. [Small]: Gly, Ala and Ser; [Large]: Ile, Val and Leu. Odds ratio = Observed number of occurrences/Expected. The error bars mark the 99% confidence interval around the expectation.

Reference: Senes A, Gerstein M. and Engelman D.M. "Statistical analysis of amino acid patterns in transmembrane helices: the GxxxG motif occurs frequently and in association with β -branched residues at neighboring positions." *J.Mol.Biol.* (2000), **296(3)**, 921-36.

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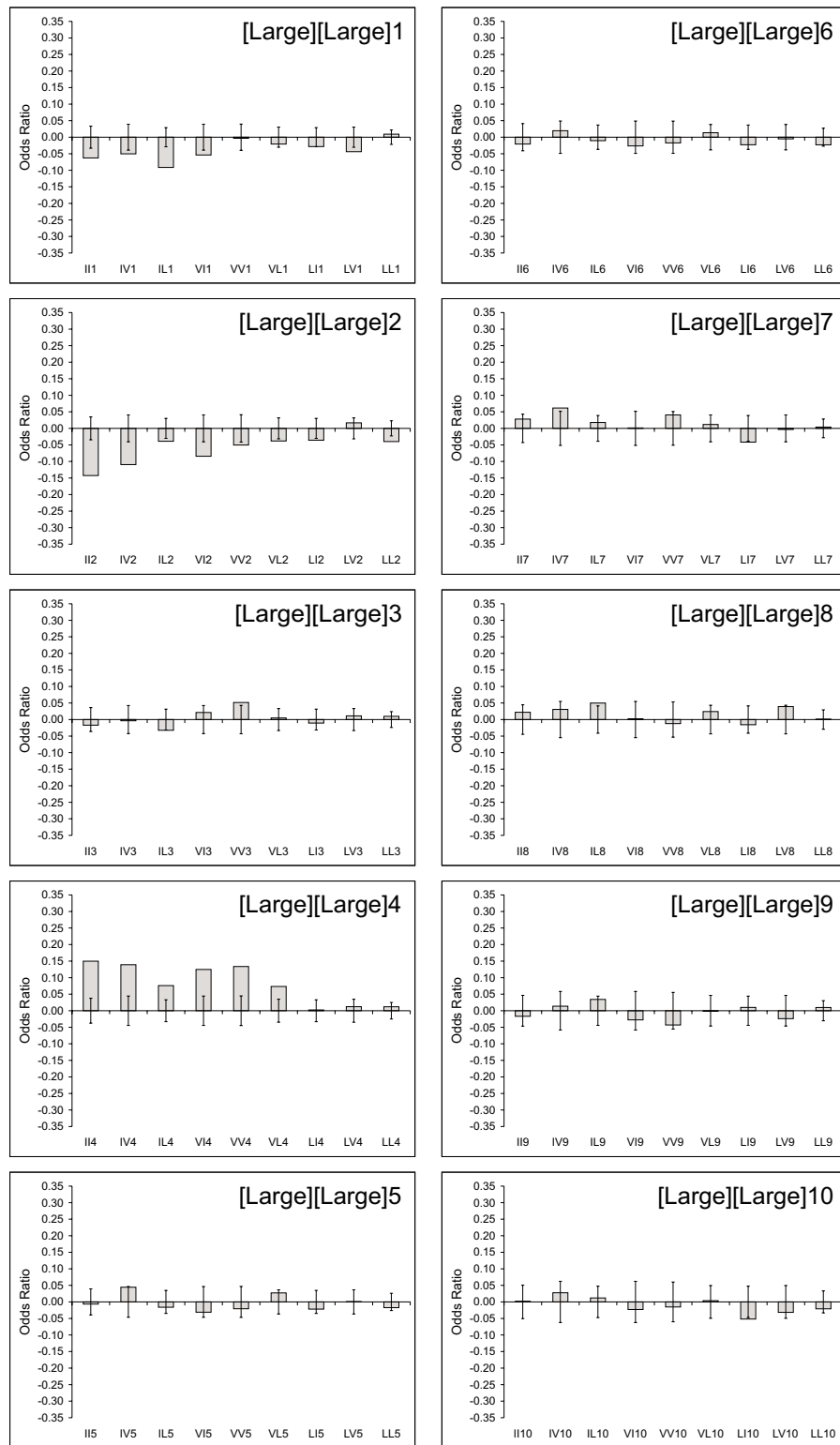


Figure S4 Odds ratios of pairs formed by two large aliphatic residues at separation 1 to 10. [Large]: Ile, Val and Leu. Odds ratio = Observed number of occurrences/Expected. The error bars mark the 99% confidence interval around the expectation.

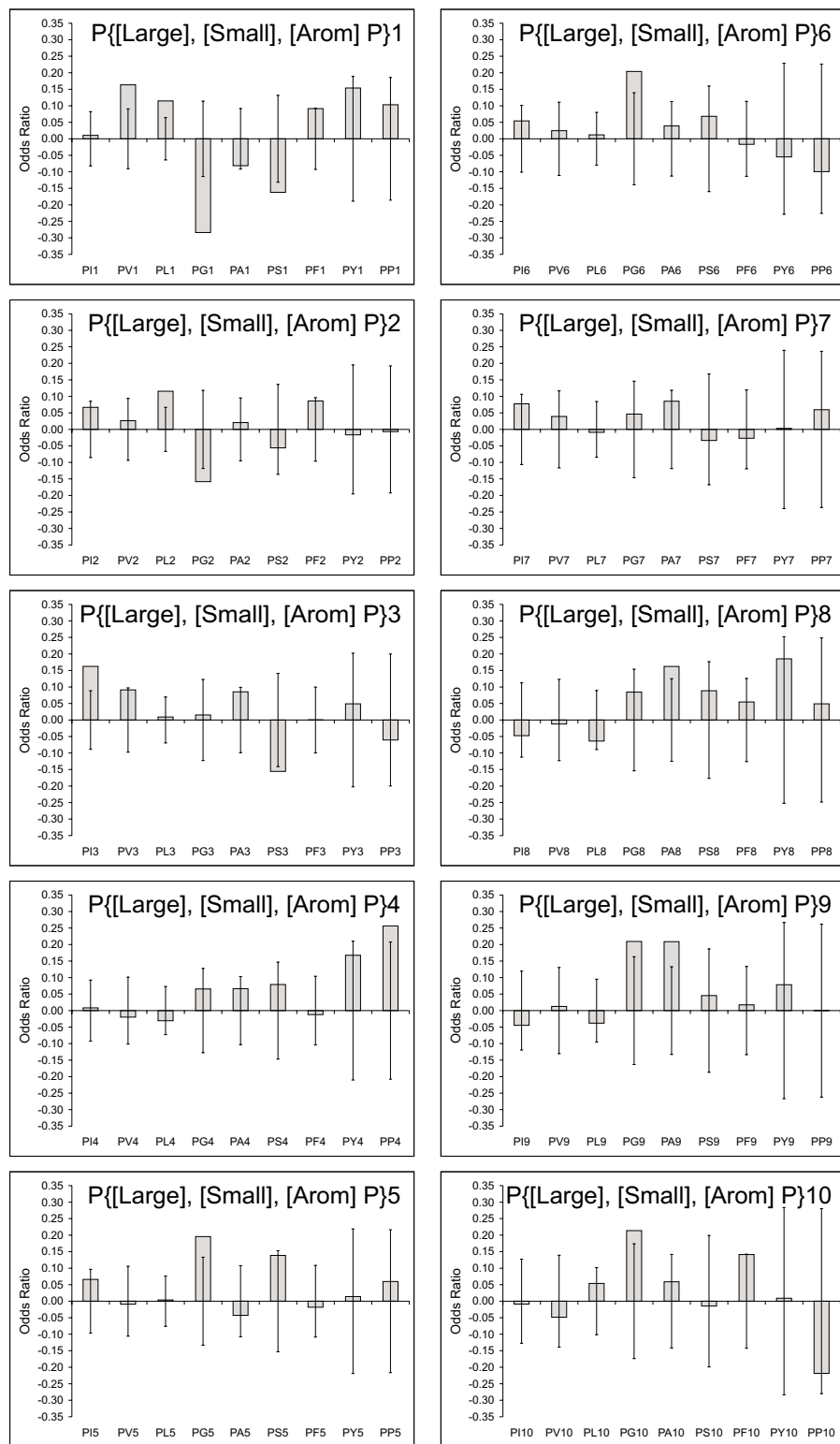


Figure S5 Odds ratios of pairs formed by proline with a large aliphatic, a small, an aromatic residue or a proline, at separation 1 to 10. [Small]: Gly, Ala and Ser; [Large]: Ile, Val and Leu; [Arom]: Phe and Tyr. Odds ratio = Observed number of occurrences/Expected. The error bars mark the 99% confidence interval around the expectation.

Reference: Senes A, Gerstein M. and Engelman D.M. "Statistical analysis of amino acid patterns in transmembrane helices: the GxxxG motif occurs frequently and in association with β -branched residues at neighboring positions." *J.Mol.Biol.* (2000), **296**(3), 921-36.

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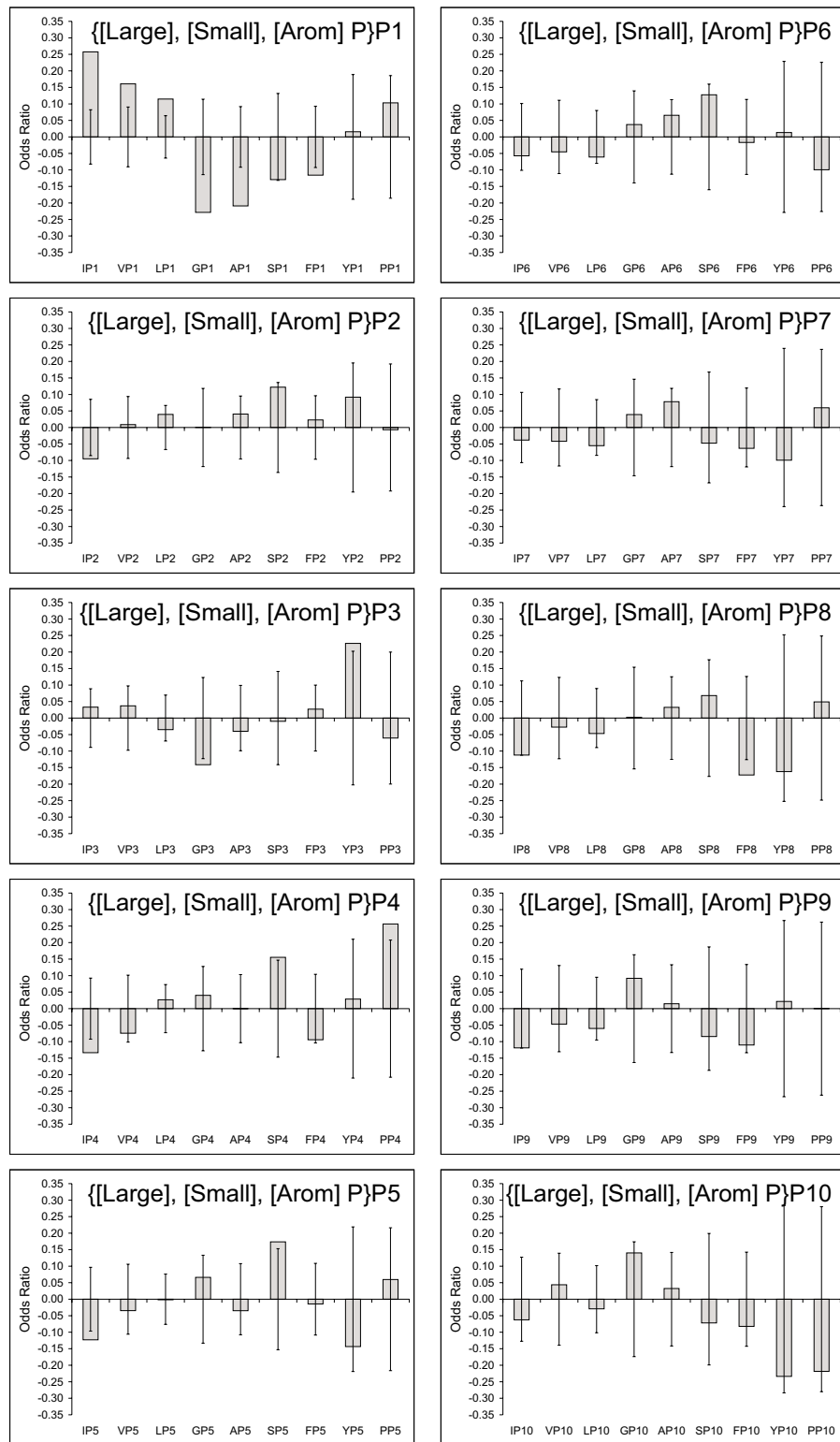


Figure S6 Odds ratios of pairs formed by a large aliphatic, a small, an aromatic residue or a proline, with a proline at separation 1 to 10. [Small]: Gly, Ala and Ser; [Large]: Ile, Val and Leu; [Arom]: Phe and Tyr. Odds ratio = Observed number of occurrences/Expected. The error bars mark the 99% confidence interval around the expectation.

Reference: Senes A, Gerstein M. and Engelman D.M. "Statistical analysis of amino acid patterns in transmembrane helices: the GxxxG motif occurs frequently and in association with β -branched residues at neighboring positions." *J.Mol.Biol.* (2000), **296**(3), 921-36.

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