

Table S1. Genus studied in each family and number of annotated Lrp/AsnC proteins. In parenthesis the number of Lrp/AsnC proteins.

| <i>Families</i> | <i>Genus</i> |
|-------------------------------|---|
| <i>Haloarculaceae</i> (426) | <i>Halapricum</i> (15); <i>Haloarcula</i> (233); <i>Halomicrobium</i> (36); <i>Halorhabdus</i> (25); <i>Halorientalis</i> (40); <i>Halosimplex</i> (8); <i>Natronomonas</i> (69) |
| <i>Halobacteriaceae</i> (344) | <i>Haladaptatus</i> (58); <i>Halalkalicoccus</i> (13); <i>Halanaeroarchaeum</i> (5); <i>Halarchaeum</i> (17); <i>Halobacterium</i> (174); <i>Halodesulfurarchaeum</i> (7); <i>Halomarina</i> (11); <i>Halovenus</i> (17); <i>Natronoarchaeum</i> (11); <i>Salarchaeum</i> (8); <i>Halorussus</i> (9); <i>Haloarchaeobius</i> (14) |
| <i>Halococcaceae</i> (48) | <i>Halococcus</i> (48) |
| <i>Haloferacaceae</i> (818) | <i>Halobellus</i> (49); <i>Haloferax</i> (546); <i>Halogeometricum</i> (64); <i>Halogranum</i> (46); <i>Halopelagius</i> (27); <i>Haloplanus</i> (40); <i>Haloprofundus</i> (17); <i>Haloquadratum</i> (29) |
| <i>Halorubraceae</i> (594) | <i>Halobium</i> (12); <i>Halohasta</i> (15); <i>Halolamina</i> (21); <i>Halonotius</i> (36); <i>Halopenitus</i> (28); <i>Halorubrum</i> (444); <i>Salinigranum</i> (21); <i>Halobaculum</i> (17) |
| <i>Natrialbaceae</i> (721) | <i>Halobiforma</i> (27); <i>Halopiger</i> (37); <i>Halostagnicola</i> (29); <i>Haloterrigena</i> (98); <i>Halovivax</i> (11); <i>Natrarchaeobius</i> (33); <i>Natrialba</i> (91); <i>Natrinema</i> (127); <i>Natronobacterium</i> (51); <i>Natronococcus</i> (35); <i>Natronolimnobi</i> (64); <i>Natronorubrum</i> (121); <i>Salinarchaeum</i> (7) |

| | | | |
|--------------------------|-----|--|-----|
| <i>Hfx. mediterranei</i> | 1 | MTYENLDAKLINALLGDRASLRSLAEELDVSVTTVSNHLRDLEDEGVIE | 50 |
| <i>Hbt. salinarum</i> | 1 | MTYENLDVKLVNELLGDRASLRSLADDLDVSVTTVSNHLQTLEDEGAVN | 50 |
| <i>Hfx. mediterranei</i> | 51 | GYTPRVNYDALGYDVTAVIQLKVEGSALPEITERLRAEKQMISVYEVTGD | 100 |
| <i>Hbt. salinarum</i> | 51 | GYTPVVDYERLGVDVTAILQLKVDGTALPEITGTLRGHKQMVSVYEITGD | 100 |
| <i>Hfx. mediterranei</i> | 101 | YDIIAIGKFRDTDGMNTQIKKLLTDTDIRESNTSVVLNAVTENEQFALDV | 150 |
| <i>Hbt. salinarum</i> | 101 | YDVLAIGKFTDTDMMNTLIKELLADADINESSTSVVLNAAAENEQFELDL | 150 |
| <i>Hfx. mediterranei</i> | 151 | DE-- | 152 |
| <i>Hbt. salinarum</i> | 151 | DGDA | 154 |

Figure S1. EMBOSS Needle alignment of Lrp (*Hfx. mediterranei*) with Lrp (*Hbt. salinarum*). The HTH binding domain is shaded in pink.

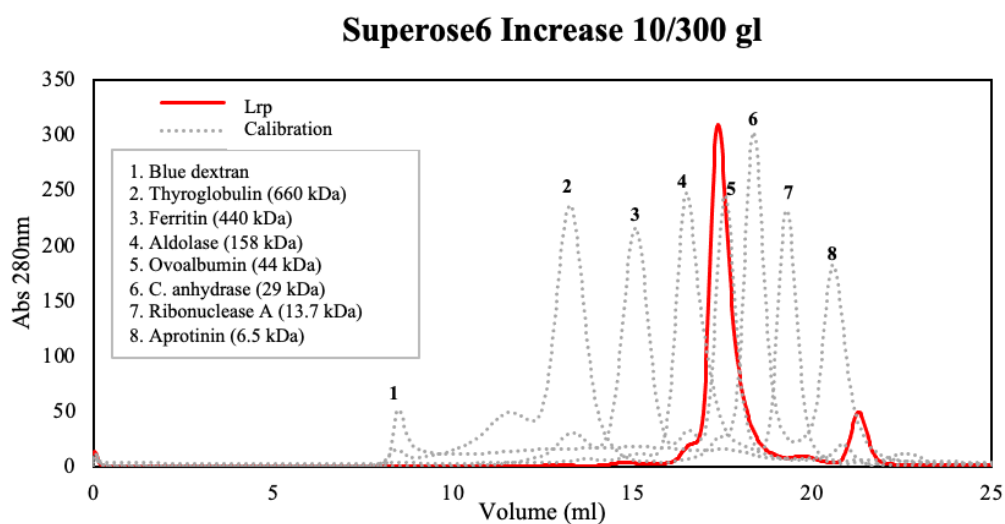


Figure S2. Chromatogram of standard proteins (dotted line) and Lrp (red line) using Superose6 Increase 10/300GL column.

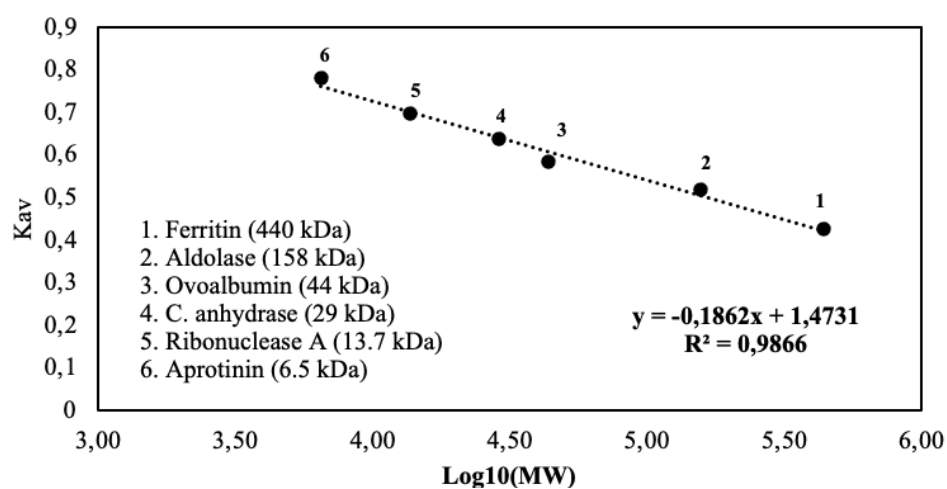


Figure S3. Size exclusion chromatography calibration curve for Superose6 Increase 10/300GL column.