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|             | 1q         | 2q                 | 3q                                        | 4q | 5q | 6q | 7q |
|-------------|------------|--------------------|-------------------------------------------|----|----|----|----|
| MaADR       | MDGFLSGFDG | AAVVTGGASGIGLATATE | SARRGARLVLSDDVDQPALEQAVNGLRGQGFDAHGVCVDRH |    |    |    |    |
| MaADR_var1  | MDGFLSGFDG | AAVVTGGASGIGLATATE | SARRGARLVLSDDVDQPALEQAVNGLRGQGFDAHGVCVDRH |    |    |    |    |
| MaADR_var2  | MDGFLSGFDG | AAVVTGGASGIGLATATE | SARRGARLVLSDDVDQPALEQAVNGLRGQGFDAHGVCVDRH |    |    |    |    |
| MaADR_var3  | MDGFLSGFDG | AAVVTGGASGIGLATATE | SARRGARLVLSDDVDQPALEQAVNGLRGQGFDAHGVCVDRH |    |    |    |    |
| MaADR_var4  | MDGFLSGFDG | AAVVTGGASGIGLATATE | SARRGARLVLSDDVDQPALEQAVNGLRGQGFDAHGVCVDRH |    |    |    |    |
| MaADR_var5  | MDGFLSGFDG | AAVVTGGASGIGLATATE | SARRGARLVLSDDVDQPALEQAVNGLRGQGFDAHGVCVDRH |    |    |    |    |
| MaADR_var6  | MDGFLSGFDG | AAVVTGGASGIGLATATE | SARRGARLVLSDDVDQPALEQAVNGLRGQGFDAHGVCVDRH |    |    |    |    |
| MaADR_var7  | MDGFLSGFDG | AAVVTGGASGIGLATATE | SARRGARLVLSDDVDQPALEQAVNGLRGQGFDAHGVCVDRH |    |    |    |    |
| MaADR_var8  | MDGFLSGFDG | AAVVTGGASGIGLATATE | SARRGARLVLSDDVDQPALEQAVNGLRGQGFDAHGVCVDRH |    |    |    |    |
| MaADR_var9  | MDGFLSGFDG | AAVVTGGASGIGLATATE | SARRGARLVLSDDVDQPALEQAVNGLRGQGFDAHGVCVDRH |    |    |    |    |
| MaADR_var10 | MDGFLSGFDG | AAVVTGGASGIGLATATE | SARRGARLVLSDDVDQPALEQAVNGLRGQGFDAHGVCVDRH |    |    |    |    |
| MaADR_var11 | MDGFLSGFDG | AAVVTGGASGIGLATATE | SARRGARLVLSDDVDQPALEQAVNGLRGQGFDAHGVCVDRH |    |    |    |    |
| MaADR_var12 | MDGFLSGFDG | AAVVTGGASGIGLATATE | SARRGARLVLSDDVDQPALEQAVNGLRGQGFDAHGVCVDRH |    |    |    |    |
| MaADR_var13 | MDGFLSGFDG | AAVVTGGASGIGLATATE | SARRGARLVLSDDVDQPALEQAVNGLRGQGFDAHGVCVDRH |    |    |    |    |
| MaADR_var14 | MDGFLSGFDG | AAVVTGGASGIGLATATE | SARRGARLVLSDDVDQPALEQAVNGLRGQGFDAHGVCVDRH |    |    |    |    |
| MaADR_var15 | MDGFLSGFDG | AAVVTGGASGIGLATATE | SARRGARLVLSDDVDQPALEQAVNGLRGQGFDAHGVCVDRH |    |    |    |    |

|             | 8q                               | 9q                            | 10q     | 11q | 12q | 13q | 14q |
|-------------|----------------------------------|-------------------------------|---------|-----|-----|-----|-----|
| MaADR       | LDEMVRLADEAFRLGGVDVVFSSNAGIVVAGP | ACTNEDDWRWVIDIDLWGSIHAVEAFLEP | LEQGTGG |     |     |     |     |
| MaADR_var1  | LDEMVRLADEAFRLGGVDVVFSSNAGIVVAGP | ACTNEDDWRWVIDIDLWGSIHAVEAFLEP | LEQGTGG |     |     |     |     |
| MaADR_var2  | LDEMVRLADEAFRLGGVDVVFSSNAGIVVAGP | ACTNEDDWRWVIDIDLWGSIHAVEAFLEP | LEQGTGG |     |     |     |     |
| MaADR_var3  | LDEMVRLADEAFRLGGVDVVFSSNAGIVVAGP | ACTNEDDWRWVIDIDLWGSIHAVEAFLEP | LEQGTGG |     |     |     |     |
| MaADR_var4  | LDEMVRLADEAFRLGGVDVVFSSNAGIVVAGP | ACTNEDDWRWVIDIDLWGSIHAVEAFLEP | LEQGTGG |     |     |     |     |
| MaADR_var5  | LDEMVRLADEAFRLGGVDVVFSSNAGIVVAGP | ACTNEDDWRWVIDIDLWGSIHAVEAFLEP | LEQGTGG |     |     |     |     |
| MaADR_var6  | LDEMVRLADEAFRLGGVDVVFSSNAGIVVAGP | ACTNEDDWRWVIDIDLWGSIHAVEAFLEP | LEQGTGG |     |     |     |     |
| MaADR_var7  | LDEMVRLADEAFRLGGVDVVFSSNAGIVVAGP | ACTNEDDWRWVIDIDLWGSIHAVEAFLEP | LEQGTGG |     |     |     |     |
| MaADR_var8  | LDEMVRLADEAFRLGGVDVVFSSNAGIVVAGP | ACTNEDDWRWVIDIDLWGSIHAVEAFLEP | LEQGTGG |     |     |     |     |
| MaADR_var9  | LDEMVRLADEAFRLGGVDVVFSSNAGIVVAGP | ACTNEDDWRWVIDIDLWGSIHAVEAFLEP | LEQGTGG |     |     |     |     |
| MaADR_var10 | LDEMVRLADEAFRLGGVDVVFSSNAGIVVAGP | ACTNEDDWRWVIDIDLWGSIHAVEAFLEP | LEQGTGG |     |     |     |     |
| MaADR_var11 | LDEMVRLADEAFRLGGVDVVFSSNAGIVVAGP | ACTNEDDWRWVIDIDLWGSIHAVEAFLEP | LEQGTGG |     |     |     |     |
| MaADR_var12 | LDEMVRLADEAFRLGGVDVVFSSNAGIVVAGP | ACTNEDDWRWVIDIDLWGSIHAVEAFLEP | LEQGTGG |     |     |     |     |
| MaADR_var13 | LDEMVRLADEAFRLGGVDVVFSSNAGIVVAGP | ACTNEDDWRWVIDIDLWGSIHAVEAFLEP | LEQGTGG |     |     |     |     |
| MaADR_var14 | LDEMVRLADEAFRLGGVDVVFSSNAGIVVAGP | ACTNEDDWRWVIDIDLWGSIHAVEAFLEP | LEQGTGG |     |     |     |     |
| MaADR_var15 | LDEMVRLADEAFRLGGVDVVFSSNAGIVVAGP | ACTNEDDWRWVIDIDLWGSIHAVEAFLEP | LEQGTGG |     |     |     |     |

|             | 15q                 | 16q                            | 17q | 18q          | 19q | 20q | 21q |
|-------------|---------------------|--------------------------------|-----|--------------|-----|-----|-----|
| MaADR       | HIAPASFAGLVPSAGLCTY | VAKYGVVGLAETLAREVKPNIGVSVLCPMV | ENL | SNSEIRIGADVC |     |     |     |
| MaADR_var1  | HIAPASFAGLVPSAGLCTY | VAKYGVVGLAETLAREVKPNIGVSVLCPMV | ENL | SNSEIRIGADVC |     |     |     |
| MaADR_var2  | HIAPASFAGLVPSAGLCTY | VAKYGVVGLAETLAREVKPNIGVSVLCPMV | ENL | SNSEIRIGADVC |     |     |     |
| MaADR_var3  | HIAPASFAGLVPSAGLCTY | VAKYGVVGLAETLAREVKPNIGVSVLCPMV | ENL | SNSEIRIGADVC |     |     |     |
| MaADR_var4  | HIAPASFAGLVPSAGLCTY | VAKYGVVGLAETLAREVKPNIGVSVLCPMV | ENL | SNSEIRIGADVC |     |     |     |
| MaADR_var5  | HIAPASFAGLVPSAGLCTY | VAKYGVVGLAETLAREVKPNIGVSVLCPMV | ENL | SNSEIRIGADVC |     |     |     |
| MaADR_var6  | HIAPASFAGLVPSAGLCTY | VAKYGVVGLAETLAREVKPNIGVSVLCPMV | ENL | SNSEIRIGADVC |     |     |     |
| MaADR_var7  | HIAPASFAGLVPSAGLCTY | VAKYGVVGLAETLAREVKPNIGVSVLCPMV | ENL | SNSEIRIGADVC |     |     |     |
| MaADR_var8  | HIAPASFAGLVPSAGLCTY | VAKYGVVGLAETLAREVKPNIGVSVLCPMV | ENL | SNSEIRIGADVC |     |     |     |
| MaADR_var9  | HIAPASFAGLVPSAGLCTY | VAKYGVVGLAETLAREVKPNIGVSVLCPMV | ENL | SNSEIRIGADVC |     |     |     |
| MaADR_var10 | HIAPASFAGLVPSAGLCTY | VAKYGVVGLAETLAREVKPNIGVSVLCPMV | ENL | SNSEIRIGADVC |     |     |     |
| MaADR_var11 | HIAPASFAGLVPSAGLCTY | VAKYGVVGLAETLAREVKPNIGVSVLCPMV | ENL | SNSEIRIGADVC |     |     |     |
| MaADR_var12 | HIAPASFAGLVPSAGLCTY | VAKYGVVGLAETLAREVKPNIGVSVLCPMV | ENL | SNSEIRIGADVC |     |     |     |
| MaADR_var13 | HIAPASFAGLVPSAGLCTY | VAKYGVVGLAETLAREVKPNIGVSVLCPMV | ENL | SNSEIRIGADVC |     |     |     |
| MaADR_var14 | HIAPASFAGLVPSAGLCTY | VAKYGVVGLAETLAREVKPNIGVSVLCPMV | ENL | SNSEIRIGADVC |     |     |     |
| MaADR_var15 | HIAPASFAGLVPSAGLCTY | VAKYGVVGLAETLAREVKPNIGVSVLCPMV | ENL | SNSEIRIGADVC |     |     |     |

|             | 22q               | 23q                           | 24q                     | 25q | 26q | 27q | 28q |
|-------------|-------------------|-------------------------------|-------------------------|-----|-----|-----|-----|
| MaADR       | MSATPEGAFGFLPTQDS | SVSADDVARLTADAILANRLYLPHAAARE | SIRRRFERIDRTFDEQAAEGWTH |     |     |     |     |
| MaADR_var1  | MSATPEGAFGFLPTQDS | SVSADDVARLTADAILANRLYLPHAAARE | SIRRRFERIDRTFDEQAAEGWTH |     |     |     |     |
| MaADR_var2  | MSATPEGAFGFLPTQDS | SVSADDVARLTADAILANRLYLPHAAARE | SIRRRFERIDRTFDEQAAEGWTH |     |     |     |     |
| MaADR_var3  | MSATPEGAFGFLPTQDS | SVSADDVARLTADAILANRLYLPHAAARE | SIRRRFERIDRTFDEQAAEGWTH |     |     |     |     |
| MaADR_var4  | MSATPEGAFGFLPTQDS | SVSADDVARLTADAILANRLYLPHAAARE | SIRRRFERIDRTFDEQAAEGWTH |     |     |     |     |
| MaADR_var5  | MSATPEGAFGFLPTQDS | SVSADDVARLTADAILANRLYLPHAAARE | SIRRRFERIDRTFDEQAAEGWTH |     |     |     |     |
| MaADR_var6  | MSATPEGAFGFLPTQDS | SVSADDVARLTADAILANRLYLPHAAARE | SIRRRFERIDRTFDEQAAEGWTH |     |     |     |     |
| MaADR_var7  | MSATPEGAFGFLPTQDS | SVSADDVARLTADAILANRLYLPHAAARE | SIRRRFERIDRTFDEQAAEGWTH |     |     |     |     |
| MaADR_var8  | MSATPEGAFGFLPTQDS | SVSADDVARLTADAILANRLYLPHAAARE | SIRRRFERIDRTFDEQAAEGWTH |     |     |     |     |
| MaADR_var9  | MSATPEGAFGFLPTQDS | SVSADDVARLTADAILANRLYLPHAAARE | SIRRRFERIDRTFDEQAAEGWTH |     |     |     |     |
| MaADR_var10 | MSATPEGAFGFLPTQDS | SVSADDVARLTADAILANRLYLPHAAARE | SIRRRFERIDRTFDEQAAEGWTH |     |     |     |     |
| MaADR_var11 | MSATPEGAFGFLPTQDS | SVSADDVARLTADAILANRLYLPHAAARE | SIRRRFERIDRTFDEQAAEGWTH |     |     |     |     |
| MaADR_var12 | MSATPEGAFGFLPTQDS | SVSADDVARLTADAILANRLYLPHAAARE | SIRRRFERIDRTFDEQAAEGWTH |     |     |     |     |
| MaADR_var13 | MSATPEGAFGFLPTQDS | SVSADDVARLTADAILANRLYLPHAAARE | SIRRRFERIDRTFDEQAAEGWTH |     |     |     |     |
| MaADR_var14 | MSATPEGAFGFLPTQDS | SVSADDVARLTADAILANRLYLPHAAARE | SIRRRFERIDRTFDEQAAEGWTH |     |     |     |     |
| MaADR_var15 | MSATPEGAFGFLPTQDS | SVSADDVARLTADAILANRLYLPHAAARE | SIRRRFERIDRTFDEQAAEGWTH |     |     |     |     |

Figure 1