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NleH1 EDL933 MLSPYSVNLGCSWNSLTRLNLTSPDNRVLSSVRDAAVHSDNGAQVKVGNRTYRVVATDNKFCVTRRESHSGCPTNLLHRLGWPKEISRKIEVMLNASPVSAAMERGI VHSNRPDLPPVDYAPPELPSVDY-----NRLSVPGN
O157:NM-15842 MLSPYSVNLGCSWNSLTRLNLTSPDNRVLSSVRDAAVHSDNGAQVKVGNRTYRVVATDNKFCVTRRESHSGCPTNLLHRLGWPKEISRKIEVMLNASPVSAAMERGI VHSNRPDLPPVDYAPPELPSVDY-----NRLSVPGN
O119:H25-EC92-267 MLSPYSVNLGCSWNSLTRLNLTSPDNRVLSSVRDAAVHSDNGAQVKVGNRTYRVVATDNKFCVTRRESHSGCPTNLLHRLGWPKEISRKIEVMLNASPVSAAMERGI VHSNRPDLPPVDYAPPELPSVDY-----NRLSVPGN
NleH1 Sakai MLSPYSVNLGCSWNSLTRLNLTSPDNRVLSSVRDAAVHSDNGAQVKVGNRTYRVVATDNKFCVTRRESHSGCPTNLLHRLGWPKEISRKIEVMLNASPVSAAMERGI VHSNRPDLPPVDYAPPELPSVDY-----NRLSVPGN
O157:H7-278F1 MLSPYSVNLGCSWNSLTRLNLTSPDNRVLSSVRDAAVHSDNGAQVKVGNRTYRVVATDNKFCVTRRESHSGCPTNLLHRLGWPKEISRKIEVMLNASPVSAAMERGI VHSNRPDLPPVDYAPPELPSVDY-----NRLSVPGN
NleH2 EDL933 MLSPSSINLGCWNSLTRLNLTSPDNRVLSSVRDAAVHSDSGTQVTVGNRTYRVVATDNKFCVTRRESHSGCPTNLLHRLGWPKEISRKIEAMLNTSPVSTTIERGSVHSNRPDLPPVDYAPPELPPADYTQSELPRVSNKSPVPGN
NleH2 Sakai MLSPSSINLGCWNSLTRLNLTSPDNRVLSSVRDAAVHSDSGTQVTVGNRTYRVVATDNKFCVTRRESHSGCPTNLLHRLGWPKEISRKIEAMLNTSPVSTTIERGSVHSNRPDLPPVDYAPPELPPADYTQSELPRVSNKSPVPGN
C. rodentium MLSPAPVNLGCSWNSLTRLNLTSPDNRVLSSVRDAAACSDNGTQVKVGNRIYRVVATDNKFCVARENHSGCPTNMLHRLGWPKEITRKEAMLNTSPVNLAMERGSVHLKRPDLPPVDYMQPELPRVDY-----NKSPVPGN
O111:H- MLSPSSVNLGCSWNSLTRLNLTSPDSRILSSVRDAAASSDNGAQVKVGNRTYRVVATDNKFCVTRRESHSGCPTNLLHRLGWPKEISRKIEVMLNSSPVNRAMERGAHVSNRPDLPPVDYAPPELPSVDY-----NSLPVPGN
O26:H11 MLSPSSVNLGCSWNSLTRLNLTSPDSRILSSVRDAAASSDNGAQVKVGNRTYRVVATDNKFCVTRRESHSGCPTNLLHRLGWPKEISRKIEVMLNSSPVNRAMERGAHVSNRPDLPPVDYAPPELPSVDY-----NSLPVPGN
O111:NM-R82F2 MLSPSSVNLGCSWNSLTRLNLTSPDSRILSSVRDAAASSDNGAQVKVGNRTYRVVATDNKFCVTRRESHSGCPTNLLHRLGWPKEISRKIEVMLNSSPVNRAMERGAHVSNRPDLPPVDYAPPELPSVDY-----NSLPVPGN
O88:H25-EC94-453 MLSPSSVNLGCSWNSLTRLNLTSPDSRILSSVRDAAASSDNGAQVKVGNRTYRVVATDNKFCVTRRESHSGCPTNLLHRLGWPKEISRKIEVMLNSSPVNRAMERGAHVSNRPDLPPVDYAPPELPSVDY-----NSLPVPGN
O69:H11-EC97-821 MLSPSSVNLGCSWNSLTRLNLTSPDSRILSSVRDAAASSDNGAQVKVGNRTYRVVATDNKFCVTRRESHSGCPTNLLHRLGWPKEISRKIEVMLNSSPVNRAMERGAHVSNRPDLPPVDYAPPELPSVDY-----NSLPVPGN
11128 OspG -----MKIISTVIQTFFPFEN-----NNSHTGVVT-----EPILGK
S. flexneri OspG -----MKITSTIIQTFFPFEN-----NNSHAGIVT-----EPILGK

NleH1 EDL933 VIGKGGNAVVEDAEADATKVLKMFTTQSQN----EVTSEVRCFNQYYGAGSAEKIYGNNGDII GIRMCKINGESLLNIS--SLPAQAEHAIYDMFDRLEQKGILFVDTTETNVLYDRAKNEFNPIDISSYVSDRSWSESQ---IMQSYHGGKQDLISVVLSKI--
O157:NM-15842 VIGKGGNAVVEDAEADATKVLKMFTTQSQN----EVTSEVRCFNQYYGAGSAEKIYGNNGDII GIRMCKINGESLLNIS--SLPAQAEHAIYDMFDRLEQKGILFVDTTETNVLYDRAKNEFNPIDISSYVSDRSW-----
O119:H25-EC92-267 VIGKGGNAVVEDAEADATKVLKMFTTQSQN----EVTSEVRCFNQYYGAGSAEKIYGNNGDII GIRMCKINGESLLNIS--SLPAQAEHAIYDMFDRLEQKGILFVDTTETNVLYDRAKNEFNPIDISSYVSDRSWSESQ---IMQSYHGGKQDLISVVLSKI--
NleH1 Sakai VIGKGGNAVVEDAEADATKVLKMFTTQSQN----EVTSEVRCFNQYYGAGSAEKIYGNNGDII GIRMCKINGESLLNIS--SLPAQAEHAIYDMFDRLEQKGILFVDTTETNVLYDRAKNEFNPIDISSYVSDRSWSESQ---IMQSYHGGKQDLISVVLSKI--
O157:H7-278F1 VIGKGGNAVVEDAEADATKVLKMFTTQSQN----EVTSEVRCFNQYYGAGSAEKIYGNNGDII GIRMCKINGESLLNIS--SLPAQAEHAIYDMFDRLEQKGILFVDTTETNVLYDRAKNEFNPIDISSYVSDRSWSESQ---IMQSYHGGKQDLISVVLSKI--
NleH2 EDL933 VIGKGGNAVVEDMEDTTKVLKMFTTISQSH----EVTSEVRCFNQYYGAGSAEKIYNDNGNVI GIRMCKINGESLLDIP--SLPAQAEHAIYDMFDRLEQKGILFVDTTETNVLYDRMRNEFNPIDISSYVSDISWSEHQ---VMQSYHGGKQDLISVVLSKI--
NleH2 Sakai VIGKGGNAVVEDMEDTTKVLKMFTTISQSH----EVTSEVRCFNQYYGAGSAEKIYNDNGNVI GIRMCKINGESLLDIP--SLPAQAEHAIYDMFDRLEQKGILFVDTTETNVLYDRMRNEFNPIDISSYVSDISWSEHQ---VMQSYHGGKQDLISVVLSKI--
C. rodentium VIGKGGNAVVEDMDDTTKVLKMFTTSQNP----EVTNEVRCFNQYYGAGSAEKIYDANGDII GIRMCKINGESLFIQ--SLPTQAEHAIYDMFDRLEQKRIKFVDTTETNVLYDRVRNEFNPIDISSYVSDVSWREGQ---IMQSYHGGKQDLIRVVLISRI--
O111:H- VIGKGGNAVVEDAEADATKVLKMFTTQSQN----EVTNEVRCFNQYYGAGSAEKIYDNGDII GIRMCKINGESLLNIS--SLPAQAEHAIYDMFDRLEQKGILFIDTTETNVLYDRTRNEFNPIDISSYVSDISWSEHQ---IMQSYHGGKQDLISVVLSKI--
O26:H11 VIGKGGNAVVEDAEADATKVLKMFTTQSQN----EVTNEVRCFNQYYGAGSAEKIYDNGDII GIRMCKINGESLLNIS--SLPAQAEHAIYDMFDRLEQKGILFIDTTETNVLYDRTRNEFNPIDISSYVSDISWSEHQ---IMQSYHGGKQDLISVVLSKI--
O111:NM-R82F2 VIGKGGNAVVEDAEADATKVLKMFTTQSQN----EVTNEVRCFNQYYGAGSAEKIYDNGDII GIRMCKINGESLLNIS--SLPAQAEHAIYDMFDRLEQKGILFIDTTETNVLYDRTRNEFNPIDISSYVSDISWSEHQ---IMQSYHGGKQDLISVVLSKI--
O88:H25-EC94-453 VIGKGGNAVVEDAEADATKVLKMFTTQSQN----EVTNEVRCFNQYYGAGSAEKIYDNGDII GIRMCKINGESLLNIS--SLPAQAEHAIYDMFDRLEQKGILFIDTTETNVLYDRTRNEFNPIDISSYVSDISWSEHQ---IMQSYH-----
O69:H11-EC97-821 VIGKGGNAVVEDAEADATKVLKMFTTQSQN----EVTNEVRCFNQYYGAGSAEKIYDNGDII GIRMCKINGESLLNIS--SLPAQAEHAIYDMFDRLEQKGILFIDTTETNVLYDRTRNEFNPIDISSYVSDISWSEHQ---IMQSYHGGKQDLISV-----
11128 OspG LIQGGSSTAEIFEDMNDSSALYKYYDLVGNQHNEVLEMARQESALFNFTFYG-DDASVVIQYGGDVI-LRMLRVPGTPLSDIDTADIPDNLESYLYQLICKLNELSIHYDLNTGNMLYDKESNSLFPIDFRNIYSEYYSATKNDKEIIDRRLQMRNTDFYSLNKRKYL
S. flexneri OspG LIQGGSSTAEIFEDVNDSSALYKYYDLVGNQHNEVLEMARQESALFNFTFYG-DEASVVIQYGGDVI-LRMLRVPGTPLSDIDTADIPDNLESYLYQLICKLNELSIHYDLNTGNMLYDKESNSLFPIDFRNIYAEYAAATKKDKKEIIDRRLQMRNTDFYSLNKRKYL