

DPY19L4	<i>H. sapiens</i>	547	PRIMTLMEEQERYDPDTVELTIIKRQAPVA	AVFAGSPQLGAIKLC	CTGWMVTS	LYND	DD	LKRNEN	YQISKSAEDYKITSYKANY	LIVEDAIC	648	
	<i>P. troglodytes</i>	547	PRIMTLMEEQERYDPDTVELTIIKRQAPVA	AVFAGSPQLGAIKLC	CTGWMVTS	LYND	DD	LKRNEN	YQISKSAEDYKITSYKANY	LIVEDAIC	648	
	<i>C. familiaris</i>	541	PRIMTLMEEQERYDPDTVELTIIKRQAPVA	AVFAGSPQLGAIKLC	CTGWMVTS	LYND	DD	LKRNEN	YQISKSAEDYKITSYKANY	LIVEDAIC	642	
	<i>B. taurus</i>	547	PRIMTLMEEQERYDPDTVELTIIKRQAPVA	AVFAGSPQLGAIKLC	CTGWMVTS	LYND	DD	LKRNEN	YQISKSAEDYKITSYKANY	LIVEDAIC	648	
	<i>M. musculus</i>	546	PRITELTEQERYDPDTVELTIIKRQAPVA	AVFAGSPQLGAIKLC	CTGWT	TS	LYSD	DD	LQRNEN	YQISKSAEDYKITSYKANY	LIVEDAIC	647
	<i>R. norvegicus</i>	546	PRITELTEQERYDPDTVELTIIKRQAPVA	AVFAGSPQLGAIKLC	CTGWT	TS	LYSD	DD	LKRNEN	YQISKSAEDYKITSYKANY	LIVEDAIC	647
	<i>M. domestica</i>	504	PRIMTLMEEQERYDPDTVELTIIKRQAPVA	AVFAGSPQLGAIKLC	CTGWMVTS	LYND	DD	LKRNEN	YQISKSAEDYKITSYKANY	LIVEDAIC	605	
	<i>G. gallus</i>	544	PRIMTLMEEQERYDPDTVELTIIKRQAPVA	AVFAGSPQLGAIKLC	CTGWMVTS	LYND	DD	LKRNEN	YQISKSAEDYKITSYKANY	LIVEDAIC	645	
	<i>X. tropicalis</i>	547	PRILALEEEHYESDTVELNIRTQAPIN	AVFAGSPAIGVR	CTGWMVTS	LYND	DD	LKRNEN	YQISKSAEDYKITSYKANY	LIVEDAIC	648	
	<i>T. nigroviridis</i>	493	PRILALSDQERYDPDVELLSIKSQAPAS	AVFAGSPILLGAIKLV	SGSATS	LYSD	IN	LKRTED	YQVGM	SAEEYKITSKHTNY	VLEE	EAIC
<i>T. rubripes</i>	502	PRILALSDQERYSDMVELLSIKSQAPAS	AVFAGSPILLGAIKLV	SGSATS	LYSD	IN	LKRAED	YQVGM	SAEEYKITSQKTY	VLEE	EAIC	603
DPY19L3	<i>H. sapiens</i>	541	PGMDLSEREYDPDTVELNINSNTPRK	AVFAGSMQLAGIK	CTGRT	TNHPHYE	SS	RETRA	YQISKSAPEEHALRSFGT	DYVLEDSIC	642	
	<i>P. troglodytes</i>	541	PGMDLSEREYDPDTVELNINSNTPRK	AVFAGSMQLAGIK	CTGRT	TNHPHYE	SS	RETRA	YQISKSAPEEHALRSFGT	DYVLEDSIC	642	
	<i>C. familiaris</i>	541	PGMDLSEREYDPDTVELNINSNTPRK	AVFAGSMQLAGIK	CTGRT	TNHPHYE	SS	RETKAY	QISKSAPEEHALRSFGT	DYVLEDSIC	642	
	<i>B. taurus</i>	541	PGMDLSEREYDPDTVELNINSNTPRK	AVFAGSMQLAGIK	CTGRT	TNHPHYE	SS	RETKAY	QISKSAPEEHALRSFGT	DYVLEDSIC	642	
	<i>M. musculus</i>	541	PGMDLSEKERYDPDTVELNINSNTPRK	AVFAGSMQLAGIK	CTGRT	TNHPHYE	SS	RETKAY	QISKSAPEEHALRSFGT	DYVLEDSIC	642	
	<i>R. norvegicus</i>	541	PGMDLSEKERYDPDTVELNINSNTPRK	AVFAGSMQLAGIK	CTGRT	TNHPHYE	SS	RETKAY	QISKSAPEEHALRSFGT	DYVLEDSIC	642	
	<i>M. domestica</i>	533	PGMALSEREYDPDTVELNINSNTPRK	AVFAGSMQLAGIK	CTGRT	TNHPHYE	SS	RETKAY	QISKSAPEEHALRSFGT	DYVLEDSIC	642	
	<i>G. gallus</i>	539	PGMDLLEEREYDPDTVELNINSNTPN	AVFAGSMQLAGIK	CTGRT	TNHPHYE	SS	RETKAY	QISKSAPEEHALRSFGT	DYVLEDSIC	640	
	<i>X. tropicalis</i>	537	PRIMELSEREYDPDTVELNISKNTPK	AVFAGSMQLAGIK	CTGRV	TNHPHYE	SS	RETKAY	QISKSAPEEHALRSFGT	DYVLEDSIC	638	
	<i>T. nigroviridis</i>	506	PALMALSEREYDPDTVELTISTKT	PKHAVFAGSMQLAGIK	CTGRV	TNHPHYE	SS	RETKAY	QISKSAPEEHALRSFGT	DYVLEDSIC	607	
DPY-19	<i>C. elegans</i>	520	PNTRQNLNVKGEYSDQEMLEFIQHNT	KQDAVFAGTMPVANIK	TLTRP	VNHPHYE	SS	RETKAY	QISKSAPEEHALRSFGT	DYVLEDSIC	621	
	<i>C. intestinalis</i>	563	GNTHWNITGEHEWPHEDLUNENEN	LKPTAVFAGMPTASIK	SCLRP	VNHPHYE	SS	RETKAY	QISKSAPEEHALRSFGT	DYVLEDSIC	664	
	<i>T. nigroviridis</i>	570	ANQALWAIIGESLPQELLIDILQENT	QPNVAVFAGMPTASIK	STGRP	VNHPHYE	SS	RETKAY	QISKSAPEEHALRSFGT	DYVLEDSIC	671	
	<i>T. rubripes</i>	569	ANQALWAIIGESLPQELLIDILQENT	QPNVAVFAGMPTASIK	STGRP	VNHPHYE	SS	RETKAY	QISKSAPEEHALRSFGT	DYVLEDSIC	670	
	<i>X. tropicalis</i>	488	SNQOSWNKIGESLPQELLIDILQENT	QPNVAVFAGMPTASIK	STGRP	VNHPHYE	SS	RETKAY	QISKSAPEEHALRSFGT	DYVLEDSIC	589	
	<i>G. gallus</i>	532	ANQALWAIIGESLPQELLIDILQENT	QPNVAVFAGMPTASIK	STGRP	VNHPHYE	SS	RETKAY	QISKSAPEEHALRSFGT	DYVLEDSIC	633	
	<i>H. sapiens</i>	518	ANQALWAIIGESLPQELLIDILQENT	QPNVAVFAGMPTASIK	STGRP	VNHPHYE	SS	RETKAY	QISKSAPEEHALRSFGT	DYVLEDSIC	619	
	<i>P. troglodytes</i>	518	ANQALWAIIGESLPQELLIDILQENT	QPNVAVFAGMPTASIK	STGRP	VNHPHYE	SS	RETKAY	QISKSAPEEHALRSFGT	DYVLEDSIC	619	
	<i>C. familiaris</i>	491	ANQALWAIIGESLPQELLIDILQENT	QPNVAVFAGMPTASIK	STGRP	VNHPHYE	SS	RETKAY	QISKSAPEEHALRSFGT	DYVLEDSIC	592	
	DPY19L1	<i>B. taurus</i>	491	ANQALWAIIGESLPQELLIDILQENT	QPNVAVFAGMPTASIK	STGRP	VNHPHYE	SS	RETKAY	QISKSAPEEHALRSFGT	DYVLEDSIC	592
<i>M. musculus</i>		491	ANQALWAIIGESLPQELLIDILQENT	QPNVAVFAGMPTASIK	STGRP	VNHPHYE	SS	RETKAY	QISKSAPEEHALRSFGT	DYVLEDSIC	592	
<i>R. norvegicus</i>		491	ANQALWAIIGESLPQELLIDILQENT	QPNVAVFAGMPTASIK	STGRP	VNHPHYE	SS	RETKAY	QISKSAPEEHALRSFGT	DYVLEDSIC	592	
<i>M. domestica</i>		491	ANQALWAIIGESLPQELLIDILQENT	QPNVAVFAGMPTASIK	STGRP	VNHPHYE	SS	RETKAY	QISKSAPEEHALRSFGT	DYVLEDSIC	592	
<i>H. sapiens</i>		603	ANRNQWSIGESLPQELLIDILQENT	QPNVAVFAGMPTASIK	STLTHP	VNHPHYE	SS	RETKAY	QISKSAPEEHALRSFGT	DYVLEDSIC	704	
DPY19L2	<i>P. troglodytes</i>	603	ANRNQWSIGESLPQELLIDILQENT	QPNVAVFAGMPTASIK	STLTHP	VNHPHYE	SS	RETKAY	QISKSAPEEHALRSFGT	DYVLEDSIC	704	
	<i>C. familiaris</i>	617	TNHNQWSIGESLPQELLIDILQENT	QPNVAVFAGMPTASIK	STLTHP	VNHPHYE	SS	RETKAY	QISKSAPEEHALRSFGT	DYVLEDSIC	718	
	<i>B. taurus</i>	618	ANHNQWSIGESLPQELLIDILQENT	QPNVAVFAGMPTASIK	STLTHP	VNHPHYE	SS	RETKAY	QISKSAPEEHALRSFGT	DYVLEDSIC	719	
	<i>M. musculus</i>	618	ANHNQWSIGESLPQELLIDILQENT	QPNVAVFAGMPTASIK	STLTHP	VNHPHYE	SS	RETKAY	QISKSAPEEHALRSFGT	DYVLEDSIC	719	
	<i>R. norvegicus</i>	618	ANHNQWSIGESLPQELLIDILQENT	QPNVAVFAGMPTASIK	STLTHP	VNHPHYE	SS	RETKAY	QISKSAPEEHALRSFGT	DYVLEDSIC	719	
	<i>M. domestica</i>	458	LNQSLISIGESLPQELLIDILQENT	QPNVAVFAGMPTASIK	STLTHP	VNHPHYE	SS	RETKAY	QISKSAPEEHALRSFGT	DYVLEDSIC	559	

Figure 5