

1 M A N G G G G G G G S S G G G G G G G G G S G L R M S S N I H A M N L S L D A S S S S S S S S S S S S S mS1o1
1 M A N G G G G G G G - - - - - G G G G S S L R M S S N I H A M H L S L D A S S S S S S S S S S S S S bS1o1

51 S S S S S S S S S S V H E P K M D A L I I P V T M E V P C D S R G Q R M W W A F L A S S M V T F F G mS1o1
44 S S S S - - - - S V H E P K M D A L I I P V T M E V P C D S R G Q R M W W A F L A S S M V T F F G bS1o1

S0

101 G L F I I L L W R T L K Y L W T V C C H C G G K T K E A Q K I N N G S S Q A D G T L K P V D E K E E mS1o1
89 G L F I I L L W R T L K Y L W T V C C H C G G K T K E A Q K I N N G S S Q A D G T L K P V D E K E E bS1o1

151 V V A A E V G W M T S V K D W A G V M I S A Q T L T G R V L V L V L V F A L S I G A L V I Y F I D S S mS1o1
139 T V A A E V G W M T S V K D W A G V M I S A Q T L T G R V L V L V L V F A L S I G A L V I Y F I D S S bS1o1

S1

201 N P I E S C Q N F Y K D F T L Q I D M A F N V F F L L Y F G L R F I A A N D K L W F W L E V N S V V mS1o1
189 N P I E S C Q N F Y K D F T L Q I D M A F N V F F L L Y F G L R F I A A N D K L W F W L E V N S V V bS1o1

S2

251 D F F T V P P V F V S V Y L N R S W L G L R F L R A L R L I Q F S E I L Q F L M I L K T S N S I K L mS1o1
239 D F F T V P P V F V S V Y L N R S W L G L R F L R A L R L I Q F S E I L Q F L M I L K T S N S I K L bS1o1

S3 S4

301 V N L L S I F I S T W L T A A G F I H L V E N S G D P W E N F Q N N Q A L T Y W E C V Y L L M V T M mS1o1
289 V N L L S I F I S T W L T A A G F I H L V E N S G D P W E N F Q N N Q A L T Y W E C V Y L L M V T M bS1o1

S5 P-

351 S T V G Y G D V Y A K T T L G R L F M V F F I L G G L A M F A S Y V P E I I E L I G N R K K Y G G S mS1o1
339 S T V G Y G D V Y A K T T L G R L F M V F F I L G G L A M F A S Y V P E I I E L I G N R K K Y G G S bS1o1

S6

401 Y S A V S G R K H I V V C G H I T L E S V S N F L K D F L H K D R D D V N V E I V F L H N I S P N L mS1o1
389 Y S A V S G R K H I V V C G H I T L E S V S N F L K D F L H K D R D D V N V E I V F L H N I S P N L bS1o1

RCK1

451 E L E A L F K R H F T Q V E F Y Q G S V L N P H D L A R V K I E S A D A C L I L A N K Y C A D P D A mS1o1
439 E L E A L F K R H F T Q V E F Y Q G S V L N P H D L A R V K I E S A D A C L I L A N K Y C A D P D A bS1o1

RCK1

501 E D A S N I M R V I S I K N Y H P K I R I I T Q M L Q Y H N K A H L L N I P S W N W K E G D D A I C mS1o1
489 E D A S N I M R V I S I K N Y H P K I R I I T Q M L Q Y H N K A H L L N I P S W N W K E G D D A I C bS1o1

RCK1

551 L A E L K L G F I A Q S C L A Q G L S T M L A N L F S M R S F I K I E E D T W Q K Y Y L E G V S N E mS1o1
539 L A E L K L G F I A Q S C L A Q G L S T M L A N L F S M R S F I K I E E D T W Q K Y Y L E G V S N E bS1o1

RCK1

601 M Y T E Y L S S A F V G L S F P T V C E L C F V K L K L L M I A I E Y K S A N R E S R I L I N P G N mS1o1
589 M Y T E Y L S S A F V G L S F P T V C E L C F V K L K L L M I A I E Y K S A N R E S R I L I N P G N bS1o1

RCK1

651 H L K I Q E G T L G F F I A S D A K E V K R A F F Y C K A C H D D V T D P K R I K K C G C R R L E D mS1o1
639 H L K I Q E G T L G F F I A S D A K E V K R A F F Y C K A C H D D I T D P K R I K K C G C K R L E D bS1o1

RCK1

701 E Q P P T L S P K K K Q R N G G M R N S P N T S P K L M R H D P L L I P G N D Q I D N M D S N V K K mS1o1
689 E Q P S T L S P K K K Q R N G G M R N S P S S S P K L M R H D P L L I P G N D Q I D N M D S N V K K bS1o1

751 Y D S T G M F H W C A P K E I E K V I L T R S E A A M T V L S G H V V V C I F G D V S S A L I G L R mS1o1
739 Y D S T G M F H W C A P K E I E K V I L T R S E A A M T V L S G H V V V C I F G D V S S A L I G L R bS1o1

RCK2

801 N L V M P L R A S N F H Y H E L K H I V F V G S I E Y L K R E W E T L H N F P K V S I L P G T P L S mS1o1
789 N L V M P L R A S N F H Y H E L K H I V F V G S I E Y L K R E W E T L H N F P K V S I L P G T P L S bS1o1

RCK2

851 R A D L R A V N I N L C D M C V I L S A N Q N I D D T S L Q D K E C I L A S L N I K S M Q F D D S mS1o1
839 R A D L R A V N I N L C D M C V I L S A N Q N I D D T S L Q D K E C I L A S L N I K S M Q F D D S bS1o1

RCK2

901 I G V L Q A N S Q G F T P P G M D R S S P D N S P V H G M L R Q P S I T T G V N I P I I T E L V N D mS1o1
889 I G V L Q A N S Q G F T P P G M D R S S P D N S P V H G M L R Q P S I T T G V N I P I I T E L V N D bS1o1

RCK2

951 T N V Q F L D Q D D D D P D T E L Y L T Q P F A C G T A F A V S V L D S L M S A T Y F N D N I L T mS1o1
939 T N V Q F L D Q D D D D P D T E L Y L T Q P F A C G T A F A V S V L D S L M S A T Y F N D N I L T bS1o1

1001 L I R T L V T G A T P E L E A L I A E E N A L R G G Y S T P Q T L A N R D R C R V A Q L A L L D G mS1o1
989 L I R T L V T G A T P E L E A L I A E E N A L R G G Y S T P Q T L A N R D R C R V A Q L A L L D G bS1o1

1051 P F A D L G D G G C Y G D L F C K A L K T Y N M L C F G I Y R L R D A H L S T P S Q C T K R Y V I T mS1o1
1039 P F A D L G D G G C Y G D L F C K A L K T Y N M L C F G I Y R L R D A H L S T P S Q C T K R Y V I T bS1o1

1101 N P P Y E F E L V P T D L I F C L M Q F D H N A G Q S R A S L S H S S H S S Q S S S K K S S S V H S mS1o1
1089 N P P Y E F E L V P T D L I F C L M Q F D H N A G Q S R A S L S H S S H S S Q S S S K K S S S V H S bS1o1

1151 I P S T A N R P N R P K S R E S R D K Q N R K E M V Y R mS1o1
1139 I P S T A N R Q N R P K S R E S R D K Q bS1o1

% Identities between Slo3 proteins (yellow) from six different species compared to
 % Identities between Slo1 proteins (grey) from the same six species

m=mouse; h=human; b=bovine; dg=dog; pg=pig; ps=possum

	mSlo3		hSlo3		bSlo3		dgSlo3		pgSlo3		psSlo3		
mSlo3	100	100											mSlo1
hSlo3	62.9	99.5	100	100									hSlo1
bSlo3	62.0	99.4	68.6	99.7	100	100							bSlo1
dgSlo3	64.4	97.6	71.3	98.0	71.0	98.1	100	100					dgSlo1
pgSlo3	62.3	99.4	70.0	99.6	76.5	99.8	73.7	98.0	100	100			pgSlo1
psSlo3	52.8	91.8	52.4	91.9	51.9	91.7	54.8	89.9	54.1	91.7	100	100	psSlo1
		mSlo1		hSlo1		bSlo1		dgSlo1		pgSlo1		psSlo1	

Alignments were made with the Megalign module of DNASTar using the Clustal V method. Both the possum sequences were incomplete and began after the S0 motif. In addition, the possum Slo3 sequence was also missing approximately 40-50 amino acids at the C-terminal.