Supplementary Data

Species

-	157	193	229 233
human	···· H <mark>a</mark> ap ·····	dfn <mark>a</mark> ·····	TH-CAYDR ····
chimpanzee	···· H <mark>A</mark> AP ·····	dfn <mark>a</mark> ·····	TH-CAYDR ····
rhesus monkey	···· H <mark>a</mark> ap ···· ···	dfn <mark>a</mark> ·····	TH-CAYDR ····
COW	···· HSAP ·····	dfn <mark>a</mark> ·····	TN-CAYDR ····
dog	·····H <mark>a</mark> ap ·····	dfn <mark>a</mark> ·····	TH-CAYDR ····
horse	···· H <mark>a</mark> ap ···· ·	dfn <mark>a</mark> ·····	TH-CA <mark>Y</mark> DR ····
pig	···· H <mark>A</mark> AP ···· ···	DFN <mark>A</mark> · · · · · · · · · ·	ht-ca <mark>y</mark> dr ····
sheep	···· HSAP ····	DFN <mark>A</mark> · · · · · · · · · · · ·	TN-CAYDR ····
rabbit	···· HSAP ····	DFN <mark>A</mark> · · · · · · · · · ·	TN-CAYDR ····
mouse	·····H <mark>A</mark> AP ·····	DFN <mark>A</mark> · · · · · · · · · ·	TH-CAYDR ····
rat	···· HSAP ····	DFN <mark>A</mark> · · · · · · · · · · ·	TH-CAYDR ····
giant panda	••••• H <mark>A</mark> AP ••••••	DFN <mark>A</mark> · · · · · · · · · · ·	TH-CAYDR ····
opossum	·····H <mark>A</mark> AP ·····	DFN <mark>A</mark> · · · · · · · · · ·	TD-CAYDR ····
platypus	••••• Н <mark>А</mark> АР ••••••	DFN <mark>A</mark> · · · · · · · · · · ·	TY-CPYDR ····
chicken	••••• H <mark>A</mark> EP ••••••	DFN <mark>A</mark> · · · · · · · · · · ·	TD-CAYDR ····
turkey	····H <mark>A</mark> EP ·····	DFN <mark>A</mark> ·····	TD-CAYDR ····
zebra finch	····HSEP ·····	DFN <mark>A</mark> ·····	TD-CAYDR ····
Japanese ratsnake	••••• H <mark>A</mark> AP •••••	DFN <mark>A</mark> ·····	TI-CAYDR ····
Japanese mamushi	••••• H <mark>A</mark> AP ••••••	DFN <mark>A</mark> ·····	TV-CAYDR ····
green anole	····H <mark>A</mark> AP ·····	DFNA ·····	SD-CA <mark>Y</mark> DR ····
African clawed frog	···· HTSP ···· .	DYNA ·····	NTNCA <mark>Y</mark> DR ····
bullfrog	···· HTSP ····	DYN <mark>A</mark> ·····	NTNCP <mark>Y</mark> DR ····
common toad	···· HTSP ···· .	DYNA ·····	NTHCPYDR ····
Japanese fire-bellied newt	···· HTSP ···· ···	DYNA ·····	NYHCA <mark>Y</mark> DR ····
tilapia	···· HTSP ···· ···	DFNA ·····	TV-CPYDR ····
common carp	···· HTSP ·····	DFN <mark>A</mark> ·····	
Japanese puffer fish	···· HTSP ···· ·	DFN <mark>A</mark> ·····	
red seabream	···· HTSP ···· ···	DFNT ·····	TTNCAYDR ····
zebrafish	···· HTSP ···· ···	DFNA ·····	TN-CPYDR ····
eel	···· HTSP ·····	DFNA ·····	TN-CPYDR ····
banded houndshark	···· HTSP ···· .	DLNA ·····	TTKCAYDR ····
Florida lancelet	••••• HTSP ••••••	DLNA ·····	TN-CAYDR ····
sea squirt	···· H <mark>A</mark> KP ·····	DFN <mark>A</mark> ·····	TD-CA <mark>Y</mark> DR ····
purple sea urchin	···· H <mark>A</mark> KP ·····		
sea anemone	••••• HTKP •••••	DFN <mark>A</mark> ·····	
Trichoplax adhaerehs	·····H <mark>A</mark> SP ······	DFN <mark>A</mark> ·····	TN-CAYDR ····

SUPPLEMENTARY FIG. S1. Multiple alignment analysis on the amino-acid sequence of animal DNases I. Only the regions including the amino-acid residues corresponding to four functional SNPs, Ala157Val, Ala193Val, Thr229Met, and Tyr233Cys, are shown. SNPs, single-nucleotide polymorphisms.