## **Supplemental Figure 1.**

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FnCel5A	DKNIIVSF <b>H</b> Y <b>Y</b> E <b>P</b> FN <b>F</b> TH <b>QG</b> AEWVSPT
gi 154250235	DKNIIVSF <b>H</b> Y <b>Y</b> E <b>P</b> FN <b>F</b> TH <b>QG</b> AEWVSPT
gi 291062452	DKNIIVSF <b>H</b> Y <mark>YEP</mark> FNFTH <mark>QG</mark> AEWVSPT
gi 340707647	DKNIIVSF <b>H</b> Y <b>Y</b> E <b>P</b> FN <b>F</b> TH <b>QG</b> AEWVSPT
gi 206901531	DKNLVVSFHYYNPFNFTHQGADWVQPQ
gi 217967062	DRNLIVSFHYYNPFNFTHQGADWVQPQ
gi 206900359	EKNIIVTFHYYNPFSFTHQGAEWVQPS
gi 217966710	EKNIIVTF <b>H</b> Y <mark>Y</mark> NPFYFTHQGAEWVQPS
gi 320161277	DRNLIVTVHYYSPFEFTHQGAEWVSGS
gi 332981061	DKNIIVTFHYYNPFWFTHQGAEWVNPS
gi 170288865	EKNSIVTI <mark>H</mark> Y <mark>Y</mark> NPFEFTHQGAEWVEGS
gi 343197112	EKNSIVTI <mark>H</mark> Y <mark>Y</mark> NPFEFTHQGAEWVEGS
gi 15644497	EKNSIVTI <mark>H</mark> Y <mark>Y</mark> NPFEFTH <mark>QG</mark> AEWVEGS
gi 343781058	EKNSIVTI <mark>H</mark> Y <b>YNP</b> FE <b>F</b> TH <b>QG</b> AEWVEGS
gi 343197126	EKNSIVTI <mark>H</mark> Y <mark>Y</mark> NPFEFTH <mark>QG</mark> AEWVEGS
gi 206900993	DKNIIVTF <mark>h</mark> y <mark>y</mark> n <mark>p</mark> fp <mark>f</mark> th <mark>og</mark> agwvkvn
gi 320101876	DPNLIVTV <mark>H</mark> F <mark>Y</mark> E <mark>P</mark> FH <mark>F</mark> TH <mark>QG</mark> AEWVEGS
gi 217967063	DENIIITF <mark>h</mark> y <mark>y</mark> n <mark>p</mark> fp <mark>f</mark> th <mark>og</mark> agwvkii
gi 255093527	DSNIVVSF <mark>H</mark> Y <mark>Y</mark> E <mark>P</mark> ND <mark>F</mark> AF <mark>QG</mark> NIYHNGF
gi 126700163	DSNIVVSF <mark>H</mark> Y <mark>Y</mark> E <mark>P</mark> ND <mark>F</mark> AF <mark>QG</mark> NIYHKGF
gi 254976137	DSNIVVSF <mark>H</mark> Y <mark>Y</mark> EPNDFAFQGNIYHNGF
gi 255101709	DSNIVVSF <mark>H</mark> Y <mark>Y</mark> E <mark>P</mark> ND <mark>F</mark> AF <mark>QG</mark> NIYHKGE
gi 260684120	DSNIVVSF <mark>H</mark> Y <mark>Y</mark> E <mark>P</mark> ND <mark>F</mark> AF <mark>QG</mark> NIYHNGE
gi 255307578	DSNIVVSF <mark>H</mark> Y <mark>Y</mark> E <mark>P</mark> ND <mark>F</mark> AF <mark>QG</mark> NIYHKGF
gi 255656529	DSNIVVSF <mark>H</mark> Y <mark>Y</mark> E <mark>P</mark> ND <mark>F</mark> AF <mark>QG</mark> NIYHKGF
gi 254294331	DPRIIVTF <mark>H</mark> D <mark>Y</mark> G <mark>P</mark> FE <mark>F</mark> TH <mark>QG</mark> ASFTAKI
gi 337278669	DRNLIVAI <mark>H</mark> T <mark>Y</mark> EPFNFTH <mark>QG</mark> VSWRPDI
gi 329850122	DRNLIVTF <mark>H</mark> Y <mark>Y</mark> T <mark>P</mark> ME <mark>F</mark> TH <mark>QG</mark> ASWTPDF
gi 319787186	DRHLIVTFHY <mark>Y</mark> EPFAFTH <mark>QG</mark> ASWVEP(
gi 326385982	DPFVVPTF <mark>H</mark> Y <mark>Y</mark> D <mark>P</mark> MT <mark>F</mark> THQGATFIHPI
gi 167645248	DRHLIATV <mark>H</mark> Y <mark>Y</mark> LPMEFTHQGASW.NPI
gi 323137789	DRNLIVTVHYYEPMRFTHQGAPW.SSE

**Supplemental Figure 1. Sequence alignment of FnCel5A with homologues.** The alignment was performed using ClustalW and ESPript. The conserved histidine is marked by *black star*.