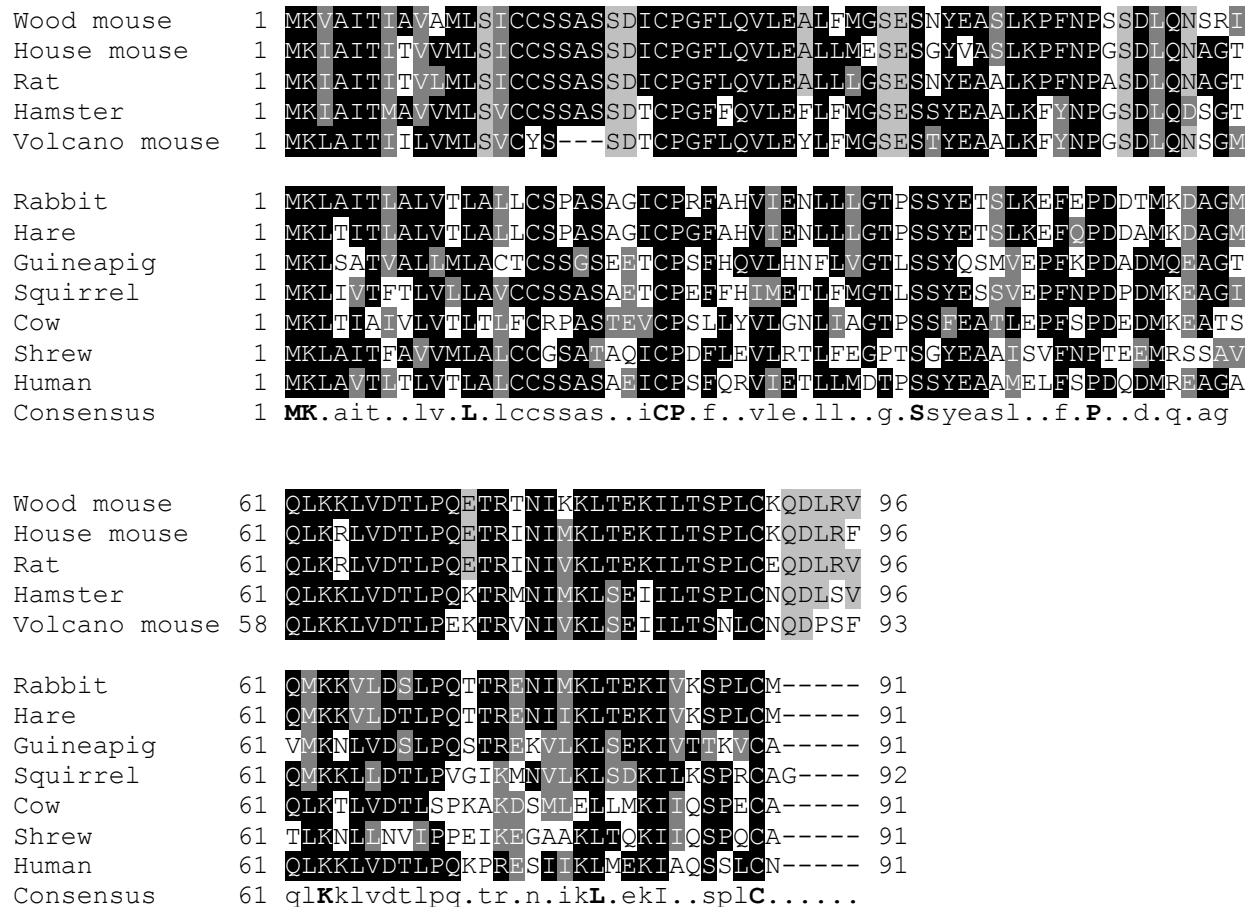


# Gammaherpesvirus infection modulates the temporal and spatial expression of SCGB1A1(CCSP) and BPIFA1 (SPLUNC1) in the respiratory tract

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## Figure E1



## Alignment of SCGB1A1 amino-acid sequences

The amino-acid sequences of SCGB1A1 from a number of mammalian species were compared using BLAST<sup>1</sup> and ClustalW 2.0<sup>2</sup> and the Clustal output was represented diagrammatically using Boxshade 3.21 ([www.ch.EMBLnet.org](http://www.ch.EMBLnet.org)). Rodent sequences are on the top 5 lines and other species below with a consensus sequence last. Black text on light grey represents residues conserved in rodents, white text on dark grey represents residues conserved between species and white text on mid-grey represents residues that are semi-conserved. The SCGB1A1 sequences used for analysis are conceptual translations from the mRNA sequences held in Genbank as follows: Wood mouse (*Apodemus sylvaticus*) HM008619.1, House mouse (*Mus musculus*) NM\_011681.2, Rat (*Rattus norvegicus*) BC069174.1, Hamster (*Mesocricetus auratus*) L37041.1, Volcano mouse (*Neotomodon alstoni*) AJ583234.1, Rabbit (*Oryctolagus cuniculus*) NM\_001082237.1, Hare (*Lepus capensis*) M25609.1, Guinea Pig (*Cavia porcellus*) XM\_003467858.1, Cow (*Bos Taurus*) NM\_001076976.2, Human (*Homo sapiens*) NM\_003357.3. The sequences of the following were from gene prediction on Ensembl: Squirrel (*Sciurus vulgaris*) ENSSTOG00000010085, Shrew (*Sorex araneus*) ENSSARG00000009790.

# Figure E2

Wood mouse	1	MFLVGSLLVLCGLLAQSTAQLAGLPLPLGQGLPLPLTLDQGLPLPLINQGLPLPLIGQGLPLAV
House mouse	1	MFLVGSLLVLCGLLAHSTAQLAGLPLPLGQGPPLPLNQGPPPLPLNQGQLLPLAOGPLAV
Rat	1	MFLVGSLLVLCGLLAQSTAQLAGLPLPLGQ-----GLPLPLIGQGLPLPLIGQGLPLAV
Hamster	1	MFLVGSLLVLCGLLAQSSAQLAGLPLPLGQ-----GLSLPLIDQSLPLPLIDQGLPLPV
Chinchilla	1	MFQIGGLIVLCGLLAQSTAQGLPLPLGQ-----VVELPLIDQGLPLSV
Kangaroo rat	1	---IGSLTIFCGLLAQSTAQGLPLPLGQ-----GLPLPLIG
Rabbit	1	MSRFGGTAFWGLLAHTVVRLEGLPLPLEQ-----ALPLPV
Cow	1	MFHIGSLVLCGLLAFTTALLEALPTPLGQ-----TLPLAV
Human	1	MFQTGGLIVFYGLLAQTMAQFCGLPVPLDQ-----TLPLNV
Consensus		Mf..G.L...cGLLA...aql.gLPPLgQ.....LPL.v

Wood mouse	60	SPALPSNPTDLLACKFTDALS GLLSGGLLGILENI PLLDVLKSGGGNS NGLVGGLLGKL
House mouse	61	SPALPSNPTDLLACKFTDALS GLLSGGLLGILENI PLLDVIKSGGGNS NGLVGGLLGKL
Rat	53	SPALPSNPTDLLACNFANALS GLLSGGLLGILENI PLLDVIKSGGGSS NGLVGGLLGKL
Hamster	53	TPGLLSNPTDHLAQSFTDALS GLLSGGLLGILENI PLLDILKSGGGNT NGLVGGLLGKL
Chinchilla	45	TPAVPLKPKDP-AGSLNGALTN GLLSGGLLGILENPLLLNLLKPGGGTSGGLTGGLLGT
Kangaroo rat	34	APALPSNPTNLVA-NFKSGLSN GLLSGGLLDILGNLPLLDILKSGDGNSSGGLTGGLLGKL
Rabbit	37	SPALPIDPTNLG-SLTNALSS GLLTCDLCTLENLPLLDILKTC-CASGGLIGNLLGT
Cow	37	TPALAPSPFDLAG-SLTGALSNGLLSEGLLGILENPLLDILKTRGNAPSGLIGSLLGKL
Human	37	NPALPLSPTGLAG-SLTNALSN GLLSGGLLGILENPLLDILKPGGGTSGGLTGGLLGKL
Consensus		.Palp..Pt.....gLS.GLLsggLIgiLeN.PLLd.lK.ggg.s.GL.GgLLG.L

Wood mouse	117	TSSIPLLNNIIDIKITDPQLELGLVQSPDGHRPYVTIPLGKIKLVNMPVVG-SLLELAV
House mouse	118	TSSVPLLNNIIDIKITDPQLELGLVQSPDGHRLYVTIPLGLTLNVNMPVVG-SLLQLAV
Rat	110	TSSVPLLNNIIDIKITDPRLLELGLVQSPDGHRLYATIPLSLKLVQVNMVVG-SFLQLAV
Hamster	110	TSSIPLLNNIIDIKITDPQLELGLVQSPDGHRLYVTIPLGLTLKVNTPVVG-SLLKLAV
Chinchilla	101	TSGIPLLNNIIDIRITNPQLELGLVQSPDGHRLYVTIPLGLNLEIKLPMIT-SLLELNL
Kangaroo rat	90	TSSIPLLNSIIDIEITDPQLELGLVQSPKGRHLYVTIPLGLIRVNTLTVG-SVLELDV
Rabbit	92	TSLIPGLNNIIDIKITNPRLELGLVQSPAGHRLYVTIPLGLILRVNTPLVG-NLLRLAV
Cow	93	TSLTPLLNNIIDIKITNPQLELGLVQSPDGHRLYVTIPLGMILNVNTSLVG-SLLRLAV
Human	93	TSVIPGLNNIIDIKITDPQLELGLVQSPDGHRLYVTIPLGIKLVQVNTPLVGASLLRLAV
Consensus		TS..PllNnI.di.iT.PqLLELGLVqSP.GHRlyvTIPLgl.L.vn.p.vg.sllL.Lav

Wood mouse	172	KLNITAEVLAVKDNQGRTHLVLDGCTHSPGSLNITLLNGVT--PVQNFLDNLTGILNKVL
House mouse	173	KLNITAEVLAVKDNQGRTHLVLDGCTHSPGSLKISLLNGVT--PVQSFVDNLTGILTQVL
Rat	165	KLNITAEIVAMKDNQGRTHLVLDGCTHSPGSLQITLLNGVT--PVQSSLDLSTGILTQVL
Hamster	165	KMNITAEVLAVKDNQGRTHLVLDGCTHSPGSLQISLLNGVT--PLOSVEFDSLDTILTQVL
Chinchilla	156	RLNVTAEVLAVRDNQGRVHLVLDGCTHSPGSLHISLLKGVAPLPVQGLLDGTTDILNKVL
Kangaroo rat	146	KLNITVEILAVRDNQGVHLVLDGCTHSPGSLHITLQNGVAPLPVQGLLDALTGVLNEVI
Rabbit	148	QLNITAEILVAKDSQGRSHLVIGDCTHPPGSLIISLLNGMAPLPVQSFNNLTGILTRVL
Cow	149	KLNITVEILAVTDEQKHVHLVVCNCTHSPGSLQIFLLDGLGSLPVQSFVDNLTGILNDVL
Human	150	KLDTITAEILAVRDKQERITHLVLDGCTHSPGSLQISLLDGLGSLPVQGLLDLSTGILNKVL
Consensus		klNiTaE.lv..D.Qgr.HLVlGdCTHsPGSL.I.Ll.G...P.Q...d.lTgiL..Vl

Wood mouse	236	PELIQGVKVCPLVNGILSGLDVTLVHDIADLLIHGLQFVIKV	277
House mouse	237	PELIQGVKVCPLVNGILSGLDVTLVHNI AELLIHGLQFVIKV	278
Rat	229	PELIQGVKVCPLVNGILSGLDVTLVHNI AELLIHGLQFVIKV	270
Hamster	229	PDLVQGVKVCPLVNGILSHLDVTLVHDI AELLIHGLQFVIKV	270
Chinchilla	222	PELVQGVKVCPLVNEVLSHLDVTLVHDI AELLIHGVQFVIKV	263
Kangaroo rat	211	PELVQGVKVCPLVNEVLSHLDVTLVHDI AELLGQVEFVIKV	252
Rabbit	213	PGLVQGVKVCPLVNGVLSHLDVSLVHDI AHMLINKLEFVAQL	254
Cow	214	PGLVQGVKVCPLVNAVLSRDLVTLVHSI IVNALIHGLQFVIKV	255
Human	215	PELVKGNVCPLVNEVLRGLDITLVHDI VNMLIHGLQFVIKV	256
Consensus		P.L.qg.VCPLvN..Ls.LDvtLVH.Iv..Lihg.qFVIkv	

## Figure E2: Alignment of BPIFA1 amino-acid sequences

The amino-acid sequence of BPIFA1 from wood mouse was compared with equivalent sequences from a number of mammalian species using BLAST, <sup>1</sup> and ClustalW2.0 <sup>2</sup> and the Clustal output was represented diagrammatically using and Boxshade3.21 (www.ch.EMBnet.org). White text on dark grey represents residues conserved between species and white text on mid-grey represents residues that are semi-conserved. The BPIFA1 sequences used for analysis are conceptual translations from the mRNA sequences held in Genbank as follows: Wood mouse (*Apodemus sylvaticus*) HM008620, House mouse (*Mus musculus*) NM\_011126.3, Rat (*Rattus norvegicus*) NM\_172031.1, Hamster (*Cricetulus griseus*) XM\_003512019.1, Chinchilla (*Chinchilla lanigera*) FJ830605.1, Cow (*Bos Taurus*) BC114803.1, Human (*Homo sapiens*) NM\_016583.3. The Kangaroo rat (*Dipodomys ordii*) sequence was from an *Ensembl gene prediction* ENSDORP00000002137

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- 2 Larkin MA, Blackshields G, Brown NP, *et al.* Clustal W and Clustal X version 2.0. *Bioinformatics* 2007;23(21):2947-2948.