

Table S2. Bioactive peptides present in human colostrum.

Parent proteins	Protein description	Peptides	Function
P05814	CSN2	SPTIPFFDPQIP	Increase cellular growth
		NQELLLNPTHQIYPVTQPLAPVHNP	Antimicrobial
		GRVMPVLKSPTIPFFDPQIPK, GRVM(+15.99)PVLKSPTIPFFDPQIPK	Immunomodulatory
		LLNQELLLNPTHQIYPVTQPLAPVHNPISV, LLNQELLLNPTHQIYPVTQPLAPVHNPIS(+79.97)V	Antimicrobial
		LLNPTHQIYPVTQPLAPVHNPIS	Antimicrobial
		DTVYTKGRV	ACE-inhibitory
		DLENLHLP	ACE-inhibitory
		TQPLAPVHNPIS	Antimicrobial
		ELLLNPTHQIYPVTQPLAPVHNPIS	Antimicrobial
		SPTIPFFDPQIPK	Increase cellular growth
		QELLLNPTHQIYPVTQPLAPVHNPISV	Antimicrobial
		NQELLLNPTHQIYPVTQPLAPVHNPISV, NQELLLNPTHQIYPVTQPLAPVHNPIS(+79.97)V	Antimicrobial
		EPIPYGFLPQN	ACE-inhibitory
		LLLNPTHQIYPVTQPLAPVHNPIS	Antimicrobial
		GRVMPVLKSPTIPFFDPQIP, GRVM(+15.99)PVLKSPTIPFFDPQIP	Immunomodulatory
		VMPVLKSPTIPFFDPQIPK, VM(+15.99)PVLKSPTIPFFDPQIPK	Immunomodulatory
		LTDLENLHLPLP	ACE-inhibitory
		ETIESLSSEESITEY, ETIES(+79.97)LS(+79.97)SSEESITEY, ETIESLSSEES(+79.97)ITEY, ETIES(+79.97)LS(+79.97)SS(+79.97)EESITEY	Increase cellular growth
		LNPTHQIYPVTQPLAPVHNPIS	Antimicrobial

	MPVLKSPTIPFFDPQIP, M(+15.99)PVLKSPTIPFFDPQIP K	Immunomodulatory
	TQPLAPVHNPISV	Antimicrobial
	MPVLKSPTIPFFDPQIP, M(+15.99)PVLKSPTIPFFDPQIP	Immunomodulatory
	NQELLLNPTHQIYPVTQPLAP VHNPIS	Antimicrobial
	NQELLLNPTHQIYP	Antimicrobial
	LLNPTHQIYPVTQPLAPVHNP ISV, LLNPTHQIYPVTQPLAPVHNP IS(+79.97)V	Antimicrobial
	TIESLSSEESITEYK, TIESLSS(+79.97)SEESITEYK, TIESLS(+79.97)SS(+79.97)EESI TEYK, TIES(+79.97)LS(+79.97)S(+79.9 7)SEESITEYK	Increase cellular growth
	LNQELLLNPTHQIYPVTQPLA PVHNPISV	Antimicrobial
	DLENLHLPLP	ACE-inhibitory
		Antimicrobial
	NQELLLNPTHQIYPVTQ	Antimicrobial
	VLSPTIPFFDPQIP	Increase cellular growth
	LNQELLLNPTHQIYPVTQPLA PVHNPIS	Antimicrobial
	YPVTQPLAPVHNPISV, YPVTQPLAPVHNPIS(+79.97)V	Antimicrobial
	RETIESLSSEESITEYK, RETIESLS(+79.97)SSEESITEY K, RETIESLS(+79.97)SS(+79.97)E ESITEYK, RET(+79.97)IESLSS(+79.97)S(+ 79.97)EESITEYK	Increase cellular growth
	TDLENLHLPLP	ACE-inhibitory
		Antimicrobial
	LLNQELLLNPTHQIYPVTQPL APVHNPIS	Antimicrobial
	NPTHQIYPVTQPLAPVHNPIS V,	Antimicrobial

	NPTHQIYPVTQPLAPVHNPIS(+79.97)V	
	ETIESLSSSEESITEYKQKVE, ETIESLSS(+79.97)S(+79.97)EESITEYKQKVE	Increase cellular growth
	T(+79.97)IESLSSSEESITEY, TIESLSSSEESITEY, T(+79.97)IESLSSS(+79.97)EESITEY	Increase cellular growth
	QDKIYPSFQPQPL	ACE-inhibitory
	NQELLLNPTHQIYPV	Antimicrobial
	LLNQELLLNPTHQIYPV	Antimicrobial
	VLKSPTIPFFDPQIPK	Increase cellular growth
	LLLNPTHQIYPVTQPLAPVHNPI	Antimicrobial
	LLLNQELLLNPTHQIYPVTQPLAPVHNPISV	Antimicrobial
	QIYPVTQPLAPVHNPISV	Antimicrobial
	NQELLLNPTHQIYPVTQPLAPVH	Antimicrobial
	NQELLLNPTHQIYPVTQPLAPVHNPI	Antimicrobial
	VPQPIPQ	ACE-inhibitory
	DLENLHLPLLL	ACE-inhibitory
		Antimicrobial
	ELLLNPTHQIYPVTQPLAPVHNPI	Antimicrobial
	RETIESLSSSEESITEY, RETIESLSS(+79.97)SEESITEY, RETIESLSSS(+79.97)EESIT(+79.97)EY, RETIES(+79.97)LS(+79.97)S(+79.97)SEESITEY	Increase cellular growth
	NQELLLNPTHQIYPVT	Antimicrobial
	TIPFFDPQIPK	Increase cellular growth
	LNQELLLNPTHQIYPV	Antimicrobial
	LLLNPTHQIYPVTQPLAPVHNPI, LLLNPTHQIYPVTQPLAPVHNPI(+79.97)V	Antimicrobial
	ELLLNPTHQIYPVTQPLAPVHNPI	Antimicrobial

	ETIESLSS(+79.97)S(+79.97)EE SITEYKQ, ETIESLSSSEESITEYKQ, ETIESLS(+79.97)SSEESITEYK Q, ETIESLS(+79.97)S(+79.97)S(+7 9.97)EESITEYKQ	Increase cellular growth
	DLENLHLPLPL	ACE-inhibitory
		Antimicrobial
	RETIESLSS(+79.97)S(+79.97)E ESITEYKQK, RETIESLSSSEESITEYKQK, RETIESLSSS(+79.97)EESITEY KQK, RETIESLS(+79.97)S(+79.97)S(+ 79.97)EESITEYKQK	Increase cellular growth
	LWSVPQPK	Antioxidant
		ACE-inhibitory
	YPSFQPQLI	ACE-inhibitory
	PTIPFFDPQIPKLT	Increase cellular growth
	RETIESLSS(+79.97)S(+79.97)E ESITEYKQKVE, RETIESLSSSEESITEYKQKVE, RETIESLS(+79.97)S(+79.97)S(+ 79.97)EESITEYKQKVE	Increase cellular growth
	LNPTHQIYPVTQPLAPVHNPIS V	Antimicrobial
	YPFVEPIP	Opioid
		Anticancer
		promote beta-cell development
	ETIESLSSS(+79.97)EESITEYK, ETIESLSSSEESITEYK, ET(+79.97)IES(+79.97)LSSSEE SITEYK, ETIES(+79.97)LS(+79.97)S(+79. 97)SEESITEYK	Increase cellular growth
	QALLNQELLLNPTHQIYPVT QPLAPVHNPISV	Antimicrobial
	PFFDPQIPK	ACE-inhibitory
	DTVYTKGRVMP, DTVYTKGRVM(+15.99)P	ACE-inhibitory
	IESLSS(+79.97)SEESITEYK, IESLSSSEESITEYK,	Increase cellular growth

	IES(+79.97)LS(+79.97)SS(+79.97)EESITEYK	
	ETIESLSS(+79.97)S(+79.97)EESITEYKQK, ETIESLSSSEESITEYKQK, ETIESLSSS(+79.97)EESITEYKQK	Increase cellular growth
	SPTIPFFDPQIPKLT	Increase cellular growth
	VPYPQRA	Antioxidant
		Antimicrobial
		ACE-inhibitory
		Antioxidant
	PVTQPLAPVHNPISV	Antimicrobial
	GRVMPVLKSPTIPFFDPQIPKLT, GRVM(+15.99)PVLKSPTIPFFDPQIPKLT	Immunomodulatory
	IPFFDPQIPK	ACE-inhibitory
	GRVM(+15.99)PVLKSPTIPFFDPQIPK, GRVMPVLKSPTIPFFDPQIPK	Immunomodulatory
	PVLKSPTIPFFDPQIP	Immunomodulatory
	SPTIPFFDPQIPKLT	Increase cellular growth
	ETIESLSSSEESITE, ET(+79.97)IESLSSSEESITE	Increase cellular growth
	LKSPTIPFFDPQIPK	Increase cellular growth
	VTQPLAPVHNPISV	Antimicrobial
	RETIESLSS(+79.97)S(+79.97)EESITEYKQ, RETIESLSSS(+79.97)EESITEYKQ, RETIESLSSSEESITEYKQ, RETIESLS(+79.97)S(+79.97)S(+79.97)EESITEYKQ	Increase cellular growth
	LLNPTHQIYPVTQPLAPVHNP	Antimicrobial
	IYPVTQPLAPVHNPISV	Antimicrobial
	QELLLNPTHQIYPVTQPLAPVHNPIS	Antimicrobial
	LTDLENLH	ACE-inhibitory
	TIESLSSSEESITEYKQKVE	Increase cellular growth
	ETIESLSSSEESITEYKQKV	Increase cellular growth
	SPTIPFFDPQIPKLT	Increase cellular growth
	YPSFQPQLIYP	ACE-inhibitory
	KDTVYTKGRVMP, KDTVYTKGRVM(+15.99)P	ACE-inhibitory
	PTIPFFDPQIPK	Increase cellular growth

	LNQELLLNPTHQIYP	Antimicrobial
	ALLLNQELLLNPTHQIYPVTQ PLAPVHNPIV	Antimicrobial
	LLNQELLLNPTHQIYPVTQPL APVHNPI	Antimicrobial
	HQIYPVTQPLAPVHNPIV	Antimicrobial
	NQELLLNPTHQIYPVTQP	Antimicrobial
	KSPTIPFFDPQIPK	Increase cellular growth
	DLENLHLPL	ACE-inhibitory
	LHLPLPLLQP	ACE-inhibitory
	FFDPQIPK	ACE-inhibitory
	TVYTKGRVMPVL, TVYTKGRVM(+15.99)PVL	ACE-inhibitory
	LLNQELLLNPTHQIYP	Antimicrobial
	ELLLNPTHQIYPVTQPLAPVH NP	Antimicrobial
	LNQELLLNPTHQIYPVTQPLA PVHNPI	Antimicrobial
	QELLLNPTHQIYPV	Antimicrobial
	DTVYTKGRVMPV, DTVYTKGRVM(+15.99)PV	ACE-inhibitory
	YPVTQPLAPVHNPIV	Antimicrobial
	PTIPFFDPQIPKL	Increase cellular growth
	ENLHLPLPLL	ACE-inhibitory
		Antimicrobial
	GRVMPVLKSPTIPFFDPQIPKL T, GRVM(+15.99)PVLKSPTIPFFD PQIPKLT	Immunomodulatory
	IYPVTQPLAPVHNPIV	Antimicrobial
	VMPVLKSPTIPFFDPQIPKLT , VM(+15.99)PVLKSPTIPFFDPQ IPKLT	Immunomodulatory
	TIPFFDPQIP	ACE-inhibitory
	IESLSS(+79.97)S(+79.97)EESIT EYKQ	Increase cellular growth
	PVLKSPTIPFFDPQIPK	Immunomodulatory
	TDLENLHLPLPL	Antimicrobial
	PVLKSPTIPFFDPQIPKLT	Immunomodulatory
	QALLLNQELLLNPTHQIYPV	Antimicrobial

NLHLPLPL	ACE-inhibitory
MPVLKSPTIPFFDPQIPKLT, M(+15.99)PVLKSPTIPFFDPQIP KLT	Immunomodulatory
TVYTKGRV	ACE-inhibitory
YPVTQPLAPVHNPI	Antimicrobial
ALLNQELLLNPTHQIYPVTQ PLAPVHNPI	Antimicrobial
LLLNPTHQIYPVTQPLAPVHN P	Antimicrobial
TIESLSS(+79.97)S(+79.97)EESI TEYKQ, TIESLSSSEESITEYKQ, TIESLSS(+79.97)SEESITEYKQ	Increase cellular growth
VM(+15.99)PVLKSPTIPFFDPQ IP, VMPVLKSPTIPFFDPQIP	Immunomodulatory
RETIESLSSSEESIT	Increase cellular growth
RETIESLSS(+79.97)S(+79.97)E ESITE, RETIESLSSSEESITE	Increase cellular growth
ENLHLPLPLLQ	ACE-inhibitory Antimicrobial
IPFFDPQIP	ACE-inhibitory
DLENLHL	ACE-inhibitory
LLNQELLLNPTHQIYPVTQPL APVH	Antimicrobial
LLLNQELLLNPTHQIYPVTQP LAPVHNPI	Antimicrobial
LLNQELLLNPTHQIYPVTQPL APVHNP	Antimicrobial
EIPYGFPL	ACE-inhibitory
DKIYPSFQQPLIYP	ACE-inhibitory
VMPVLKSPTIPFFDPQIPKLT, VM(+15.99)PVLKSPTIPFFDPQ IPKLT	Immunomodulatory
TDLENLHLP	ACE-inhibitory
TIPFFDPQIPKL	Increase cellular growth
DTVYTKGRVM(+15.99)	ACE-inhibitory
LNQELLLNPTHQIYPVTQ	Antimicrobial
IYPSFQQPLIYP	ACE-inhibitory
LNQELLLNPTHQIYPVTQPLA PVHNP	Antimicrobial
LLNQELLLNPTHQIY	Antimicrobial
NQELLLNPTHQIYPVTQPLAP VHN	Antimicrobial

		LNQELLNPTHQIYPVTQPLA PVH	Antimicrobial
		PVTQPLAPVHNPIS	Antimicrobial
		ELLLNPTHQIYPVTQPLAPVH N	Antimicrobial
		IYPSFQPQPLI	ACE-inhibitory
		LKSPTIPFFDPQIP	Increase cellular growth
		LNQELLNPTHQIYPVTQP	Antimicrobial
		EIPYGFPLPQ	ACE-inhibitory
		YPVTQPLAPVHNP	Antimicrobial
		DKIYPSFQPQPL	ACE-inhibitory
		LLLNQELLNPTHQIYPVTQP LAPVHNPI	Antimicrobial
		QELLLNPTHQIYPVTQPLAPV HNP	Antimicrobial
		RVMPVLKSPTIPFFDPQIP	Immunomodulatory
		ENLHLPLP	ACE-inhibitory
		LTDLENLHLP	ACE-inhibitory
		LTDLENLHPL	ACE-inhibitory
		LENLHLPLP	ACE-inhibitory
		WSVPQPK	Antioxidant
			ACE-inhibitory
		LHLPLPLL	ACE-inhibitory
		KSPTIPFFDPQIP	Increase cellular growth
		PVTQPLAPVHNP	Antimicrobial
		SFQPQPLIYPF	ACE-inhibitory
		HQIYPVTQPLAPVHNP	Antimicrobial
		PTIPFFDPQIP	Increase cellular growth
		QELLLNPTHQIYPVTQPLAPV HNPI	Antimicrobial
		LNQELLNPTHQIYPVT	Antimicrobial
		EHQDKIYPSFQPQPLIYP	ACE-inhibitory
		GRVMPVLKSPTIPFFDPQIPKL , GRVM(+15.99)PVLKSPTIPFFD PQIPKL	Immunomodulatory
		ENLHLPLPLLQP	ACE-inhibitory
		QELLLNPTHQIYPVT	Antimicrobial
		IYPSFQPQPLIYPF	ACE-inhibitory
		RVMPVLKSPTIPFFDPQIPK	Immunomodulatory
P07498	CSN3	NPYVPRT	Antioxidant



		NNPYVPR	Antioxidant
		NPYVPR	Antioxidant
		NPAVVRP	ACE-inhibitory
		NPAVVRPH	ACE-inhibitory
		TYYANPAVVRP	ACE-inhibitory
		ANPAVVRPHA	ACE-inhibitory