CCK reduces the food intake mainly through CCK1R in Siberian sturgeon (*Acipenser baerii* Brandt)

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Supplementary Fig. 1 Amino acid sequence alignment of Siberian sturgeon CCK with other vertebrates, including Human (Homo sapiens, AH002739), Rat (Rattus norvegicus, NM_012829), Chicken (Gallus gallus, NM_001001741), Chinese soft-shelled turtle (Pelodiscus sinensis, XM_006131816), African clawed frog Z47558/ Z47557), Coelacanth (Latimeria (Xenopus laevis, chalumnae, XM_006013037), rainbow trout (Oncorhynchus mykiss, NM_001124611/ NM_001124345), Schizothorax prenanti (KJ194185), Astyanax mexicanus (XM_007250428), Nile tilapia (Oreochromis niloticus, NM_001279730), Large yellow croaker (Larimichthys crocea, KC899121/ KF938690), Atlantic herring (Clupea harengus, NM_001309836), Japanese eel (Anguilla japonica, AB109556) and Japanese flounder (Paralichthys olivaceus, AB009281). The colored amino acids highlight the differences in conservation of the amino acids between species of CCK.

Supplementary Fig. 2 Phylogenetic analysis of CCK amino acid sequences was performed using MEGA 7.0 software of maximum likelihood method with default settings. Scale bar indicates the substitution rate per residue. Numbers at nodes indicate the bootstrap value, as percentages, obtained for 1000 replicates. GenBank accession numbers were listed in the legend of Supplementary Fig.1.

Supplementary Fig. 1

Homo sapiens Rattus norvegicus Gallus gallus Pelodiscus sinensis African clawed frog-CH African clawed frog-CG Latimeria chalumnae

• Acipenser baerii Japanese eel Japanese flounder Nile tilapia Atlantic herring Large yellow croaker-1 Large yellow croaker-2 Rainbow trout-T Rainbow trout-T Astyanax mexicanus Schizothorax prenanti consensus

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Schizothorax prenanti

consensus

MINSGVC LCVL HAVLAAG-AL TOPVPPADPACSGLORAEEAPRROL EVSOR TDG
INSERVE OV TAVEAAG-ALLOGYPPADPACSG_URAEEAPRROLEAVSGTDG
VGGTGTGVLLAALSVS-SLCOOPAGSHD-GSPV/AELOOSLTEPHR SRAPSSACPLXCAPLDGSF
YSGIC YVFLAVLSNS-AFEQQATGSHN-DNPV, TE_EQSLTEHHR, VRVPSSA
CSGVC CLLLANLSAS-SK/HOATGSLG-EDAVCTE_DQLNLSQLP: YAR/SSA
VISGIC CLULATUSAS-SKINGS DAVVTE DOLTLSQLP VAR SSA
VSGICICI FLAVESMG-OFFOOTTGSNN-OSLM/GDTEORETTHER: VRA/ PSS00LXEEP//LEGNPDORA
MNSGICVCVLLATLSTS-CLERLSAGSDDEGSPVASELDQSLSVHQRQVRAATSN
MNGGICVCVLLAALSTS-CLERP-SSNTODESRAAQSQVDTVLSEHMREARSTPLSDQQKPKAEEGVDSRA
NTAGLOVOVLLAVECTS-CLCHPISSOHED_GORSISTPSEALLEADTHSEEPHERQSRSAPQLY-SEPVAEEDGOSRA
MNAGLCVCVVLAVLCAS-CLEUPFSSQPLD=GQRPVSALSEAVLEADTHTLEDLHLRHRRSAPQLK-ALPLAEEDADSRA
MNCGICVCVLLAALSSSGCLELPAHPPODEGHARTGAUSRAAAAVHREHTRSVAAP-SEAULPFTKAAVEDEEEQ-DPRT
MTAGLOVOVYLAVICTS-CLEUPFSSQLLD_GQRS I SAPSEALLEAGTHTLEEPNLQHSHSAPQLE-ALPLAEEDADSRA
MNV <mark>gTCVCVLLA</mark> ALSSS-SLSLPSHAMSQRTEGEALPSDSLS-PQHTI:QARSAPAPSS <mark>QQL</mark> ANYNQAS
MNAGICVCVLLVAFSGS-SLERPSHS-QDEDKPEPPOLDSVMSPQHTRHTRSAPS-SGOLIPFSXPA-EDEAE-DPRT
MTAGLCMCVLLVVLCTS-CSCRTHFSPNLQEGSPALPPPSEARLETKAHFLSEPYLRHTHSSPLVN-TKPYMGEGRNSRA
MNAGICACVILIALLYSSGCLALPTHS-LDEGOLEGAVAEHTRHTRAVPL-SGCITLLSWAQ-EEEVEG-DPAR
MNAGICYRVLLAALSISSCUSLPTHS-EDGGQSDUGTVVEHTRHTRAPSSGOUSLLSKAE-DDEEPRS
*. *.*
11020304050607080

HLGALLARY LOOARKA		NI DPSHR ISDRO	YMGWMDFGRRS	AFEY-EYES
REGALLARY OWERA	-PSGRMSV KNL-Q			
TIGALLAKYLOOARKG	STGRESVLGNRVQ			
NFGALLAKYLQQARKG	-PUGR ISV GNRVQ			
N I GNALVKYL QQSFKAG-	-PSGRYVV PNR-P			
N I GNVLVKYLQQSRKAG	-PSGRYVV PNR-P			
N GALL TKYL QOARRG	-SSGRYALI GSKAG			
NLGPLLARYLKOARKG	-SSGRNLALSSKS0			
SUTELLARLIS-RO-	-GNTRRNST INSRAS			
NLSELLARL ISSRK	-GSVRRNSTAYSKG-			
NLSELLARLISSRK	-GEVRENSTANSKGV			
SUTOLIATLIARK	-GASRRNSVI TSRAS			
NLSELLARLISSRK	-GEVRENSTANSEGN			
	GSPYOTRES TERAS			
SLRELLARLISRK	-GSLORSSSLSSEAS	GPGPSHK KORD	YLGWMDFGRRS	AEEYEEYSS
KLSELLARLISSOK	-GY I SGNSTVNSRAS	GSANHLIKNR	YTGWMDFGRRS	AEEN-EHSL
KLNELLARLISRKEDFPYLS	SGEYRRSPASESA	NVNHR IKORD	YLGWMDFGRRS	AEEY-EYSS
SLTELLAR I ISTK	-GTYRRSPSPNSRSM	GNNHR I KORD	YLGWMDFGRRS	AEEY-EYSS
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90 10	110	120	120	140 146

Supplementary Fig. 2

