

GDGM01056802.1|Octinsulin-2|Ptychodera\_flava|Ambulacraia/1-115 1 ----- --MEINQVIFAVMVTILFVA----- --NCYARRNQGGDDV--FCSTRIV 37  
XP\_006815147.1|Octinsulin-2|Saccoglossus\_kovalevskii|Ambulacraia/1-117 1 ----- --MDAHIQIFIAMVTFLSIA----- --GCGRRSSGVDDDLGKRRK-L 39  
Veenstra\_2021|Octinsulin-2|Schizocardium\_californicum|Ambulacraia/1-112 1 ----- --LNGRRNRPSSEVY--RERK-L 37  
Veenstra\_2021|Octinsulin-3|Schizocardium\_californicum|Ambulacraia/1-122 1 ----- --MDTNQVIFAVMVTFLLL----- --LFCYGRNRPSSEVY--RERK-L 37  
XP\_006815146.1|Octinsulin-1|Saccoglossus\_kovalevskii|Ambulacraia/1-156 1 ----- --MK----- --FIPVAVLVMSLFIH----- --PS----- --SQAIRH-RSG--VSCGNRLR 38  
GDGM01306917.1|Octinsulin-1|Ptychodera\_flava|Ambulacraia/1-128 1 MPTKVTMDTKSPIT----- --NLSLKLIFIVVITM----- --LMSITCISMSRNN--WHC-GRPV 46  
Veenstra\_2021|Octinsulin-4|Ptychodera\_flava|Ambulacraia/1-119 1 ----- --MKNNT----- --FVSLKLLVSVVVL----- --VCSISDALRRE--WHC-GRIV 39  
Veenstra\_2021|Octinsulin-5|Ptychodera\_flava|Ambulacraia/1-116 1 ----- --MNSLAS----- --FLVLTITALLCV--S----- --S CRAFL-FNH--RSCGTRLA 36  
Veenstra\_2021|Octinsulin-5|Ptychodera\_flava|Ambulacraia/1-116 1 ----- --MLSLRV----- --GLVLAWFSVMALFSA----- --SQAIRH-RSG--VSCGNRLR 38  
XP\_006815148.1|Octinsulin-3|Saccoglossus\_kovalevskii|Ambulacraia/1-116 1 ----- --MHTALVFLVSMATIDCLPVDDTTTGQVVDVDRD-SRL--WLC-GRVL 44  
Veenstra\_2021|Octinsulin-6|Ptychodera\_flava|Ambulacraia/1-125 1 ----- --MIQERT----- --FLLSTALLVAFAIGQVRTDLLPGNGDY--SNSANS-RGN--WHC-GRIV 49  
GDGM01137961.1|Octinsulin-7|Ptychodera\_flava|Ambulacraia/1-126 1 ----- --MIQVRA----- --FLLSTALLVAFAIGQVRTDLLPGNGDY--SNSAKK-RRD--LDC-THLV 49  
Veenstra\_2021|Octinsulin-3|Ptychodera\_flava|Ambulacraia/1-126 1 ----- --MIQVRA----- --FLLSTALLVAFAIGQVRTDLLPGNGDY--SNSAKK-RRD--LDC-THLV 49  
GDGM01418242.1|Octinsulin-8|Ptychodera\_flava|Ambulacraia/1-126 1 ----- --MILVRA----- --FLLSTALLVAFAIGQVRTDLLPGNGDY--SNSAKK-RRD--LDC-SLLI 49  
g7806.t1\_Xenoturbella\_bocki\_insuline-like\_peptide\_c|Xenacoelomorpha/1-112 1 ----- --MVNTTC----- --LVCVLA----- --LFLTPVVLVMDI----- --VFDALFISK-RRE--WHCNGVA 44  
JXSR015001403.1|Octinsulin|Ophiothrix\_spiculata|Ambulacraia/1-144 1 ----- --MGFEH----- --LTFRIA-PRDTFLLITVVLVVC----- --CCYVV--E-GNQ--WFCSP-VF 46  
Veenstra\_2021|Octinsulin|Amphiura\_filiformis|Ambulacraia/1-141 1 ----- --MGLLEQ----- --VLRIG-PRY--LFLSVVLAFA-C----- --CCYVGAQR-HER--WYCTP-VF 44  
Veenstra\_2021|Octinsulin|Ophioderma\_brevispinal|Ambulacraia/1-140 1 ----- --MGLLEDY----- --VTLRIA-PRNTSILVLLVLAAC-C----- --CCYVGAQR--R--WYCTP-VF 44  
Veenstra\_2021|Octinsulin|Asterias\_rubens|Ambulacraia/1-132 1 ----- --MTQSSR----- --GNLRLTPQARQAT--ALSIVFC----- --LCFWYASANA--WYCS-DV 45  
Veenstra\_2021|Octinsulin|Pisaster\_ochraceus|Ambulacraia/1-132 1 ----- --MTHSR----- --GHLHMSLTPQARQAT--VLSLVFF----- --LCFWYASANA--WYCS-DV 45  
XP\_022079235.1|Octinsulin|Acanthaster\_planci|Ambulacraia/1-132 1 ----- --MTHSLR----- --GTLRLPLPQARQAT--VMSLVLL----- --ACFWYASANA--DS--WYCS-DV 44  
XP\_038074081.1|Octinsulin|Patiria\_miniatia|Ambulacraia/1-133 1 ----- --MPSSTR----- --GTLRLPLPQARQAT--VMSLVLL----- --ACFWYASANA--N--WFCS-DV 44  
Veenstra\_2021|Octinsulin|Anneissia\_japonica|Ambulacraia/1-147 1 ----- --MMTKLLC----- --GQH-EHIS-TVSLA--ITVVVVL----- --FCHVQVAG-ARD--WYCGN-AA 44  
Veenstra\_2021|Octinsulin|Oligometra\_serripinna|Ambulacraia/1-140 1 ----- --MTKIFC----- --RQH-EHMA-TASLA-VTAIFVL----- --LSQVQVTD-ARD--WYCGN-AA 43  
Veenstra\_2021|Octinsulin|Antedon\_mediterranea|Ambulacraia/1-140 1 ----- --MTKLF----- --GQH-EHVA-TSLV-ITVVVVL----- --LSQVQVTD-ARD--WYCGN-AA 43  
Veenstra\_2021|Octinsulin|Florometra\_serratissima|Ambulacraia/1-140 1 ----- --MTKLF----- --GQH-KNMA-TASLV-ITVVVVL----- --LSHVQVTD-ARD--WYCGN-AA 43  
Veenstra\_2021|Octinsulin|Lytechinus\_variegatus|Ambulacraia/1-149 1 ----- --MV----- --EWGKVSFRSS--TNKLL-GVAVAVL----- --LLVCVCAA-GQS--WHCGR-AA 43  
Veenstra\_2021|Octinsulin|Hemicentrotus\_pulcherrimus|Ambulacraia/1-150 1 ----- --MV----- --EWGKVSIRSS--NNKLL-GVAVAVL----- --LLVCVCAA-GQS--WHCGR-AA 43  
XP\_001175486.2|Octinsulin|Strongylocentrotus\_purpuratus|Ambulacraia/1-150 1 ----- --MV----- --EWGKVSIRSS--NNKLL-GVAVAVL----- --LLVCVCAA-GQS--WHCGR-AA 43  
MF4019962|Octinsulin|Apostichopus\_japonicus|Ambulacraia/1-151 1 ----- --MAK----- --LGLAPSGGKRWFS TG--STVL----- --FLVAG----- --LSFFVYAA-EGS--WYCGS-AP 45  
Veenstra\_2021|Octinsulin|Holothuria\_glaberrima|Ambulacraia/1-155 1 ----- --MAKVTPIIPLVVGSTRWFSVVG--GVAL----- --CFVLF----- --ASLCYMTS-GQS--WHCGRS-AT 47

GDGM01056802.1|Octinsulin-2|Ptychodera\_flava|Ambulacraia/1-115 38 SMVESVDCGCVYATQDQSSPKSE----- --AMNLS----- --VQ----- 67  
XP\_006815147.1|Octinsulin-2|Saccoglossus\_kovalevskii|Ambulacraia/1-117 40 LLVDQICAGCAPDIDINNENN----- --DLTGKG----- --PG----- 69  
Veenstra\_2021|Octinsulin-2|Schizocardium\_californicum|Ambulacraia/1-112 38 HMVLKLCNGCLAPIESEVENN----- --ISNE----- --T----- 65  
Veenstra\_2021|Octinsulin-3|Schizocardium\_californicum|Ambulacraia/1-122 39 EILSGVRCGYAEPLQPPGKR----- --DI----- --LNKQASLFLRSNG----- 76  
XP\_006815146.1|Octinsulin-1|Saccoglossus\_kovalevskii|Ambulacraia/1-156 47 EIMHEVCGGCVAGHVRPRNTR----- --SV----- --DGVQAFISRRDANMFVKGMSPDV----- 92  
GDGM01306917.1|Octinsulin-1|Ptychodera\_flava|Ambulacraia/1-128 47 ETMQGICRCGCVYAGDSE-RSTN----- --EA----- --ERQAFISRRDANMFVKGMSPDV----- 92  
Veenstra\_2021|Octinsulin-4|Ptychodera\_flava|Ambulacraia/1-119 37 ELSQICRCGCVYAGDSE-RSTN----- --EA----- --ERQAFISRRDANMFVKGMSPDV----- 92  
Veenstra\_2021|Octinsulin-5|Ptychodera\_flava|Ambulacraia/1-116 39 DSLASLCCGCVYAGDSE-RSTN----- --EA----- --ERQAFISRRDANMFVKGMSPDV----- 92  
XP\_006815148.1|Octinsulin-3|Saccoglossus\_kovalevskii|Ambulacraia/1-116 45 ETLRALRCGCVYAGDSE-RSTN----- --EA----- --ERQAFISRRDANMFVKGMSPDV----- 92  
Veenstra\_2021|Octinsulin-6|Ptychodera\_flava|Ambulacraia/1-125 50 TILSFCRCGCVYAGDSE-RSTN----- --EA----- --ERQAFISRRDANMFVKGMSPDV----- 92  
GDGM01137961.1|Octinsulin-7|Ptychodera\_flava|Ambulacraia/1-126 50 DIMSFCRCGCVYAGDSE-RSTN----- --EA----- --ERQAFISRRDANMFVKGMSPDV----- 92  
Veenstra\_2021|Octinsulin-3|Ptychodera\_flava|Ambulacraia/1-126 50 EMSLFCRCGCVYAGDSE-RSTN----- --EA----- --ERQAFISRRDANMFVKGMSPDV----- 92  
GDGM01418242.1|Octinsulin-8|Ptychodera\_flava|Ambulacraia/1-126 50 EMSLFCRCGCVYAGDSE-RSTN----- --EA----- --ERQAFISRRDANMFVKGMSPDV----- 92  
g7806.t1\_Xenoturbella\_bocki\_insuline-like\_peptide\_c|Xenacoelomorpha/1-112 45 ETLHMLGSGCVYAGDSE-RSTN----- --EA----- --ERQAFISRRDANMFVKGMSPDV----- 92  
JXSR015001403.1|Octinsulin|Ophiothrix\_spiculata|Ambulacraia/1-144 47 TMLQSMCGSVCYAGIDK-RSDNS----- --DTLS----- --KQQLSDAFIQKEVAYSFIKRTSVGD----- 96  
Veenstra\_2021|Octinsulin|Amphiura\_filiformis|Ambulacraia/1-141 45 SMLQSMCGSVCYAGIDK-RSDNS----- --DTLS----- --KQQLSDAFIQKEVAYSFIKRTSVGD----- 96  
Veenstra\_2021|Octinsulin|Ophioderma\_brevispinal|Ambulacraia/1-140 45 TMLQSMCGSVCYAGIDK-RSDNS----- --DTLS----- --KQQLSDAFIQKEVAYSFIKRTSVGD----- 96  
Veenstra\_2021|Octinsulin|Asterias\_rubens|Ambulacraia/1-132 46 STLQSLCDSVCYAGYAK-RSDQ----- --TKTI----- --DPMFDRKTAADFVKRGTSRG----- 90  
Veenstra\_2021|Octinsulin|Pisaster\_ochraceus|Ambulacraia/1-132 46 STLQSLCDSVCYAGYAK-RSDQ----- --TKTI----- --DPMFDRKTAADFVKRGTSRG----- 90  
XP\_022079235.1|Octinsulin|Acanthaster\_planci|Ambulacraia/1-132 45 STLQSLCDSVCYAGYAK-RSDQ----- --TKTI----- --DPMFDRKTAADFVKRGTSRG----- 90  
XP\_038074081.1|Octinsulin|Patiria\_miniatia|Ambulacraia/1-133 45 STMNSLDCDSVCYAGYDK-RTNTI----- --TRPI----- --EFPFVERKNAADFVKRGTARG----- 91  
Veenstra\_2021|Octinsulin|Anneissia\_japonica|Ambulacraia/1-147 45 DTLKEFCQSCVYASKRAHNAL----- --SLPSI-KAKKDG-MFLT-REGASGYLEAKRTRLF----- --SS- 97  
Veenstra\_2021|Octinsulin|Oligometra\_serripinna|Ambulacraia/1-140 44 TLMDFCRSCVYATKRAHT----- --SLPSSK-RTDG-MFLT-REGASGYLEAKRTRLF----- --SSA 94  
Veenstra\_2021|Octinsulin|Antedon\_mediterranea|Ambulacraia/1-140 44 NTLMNFQSCVYATKRAHT----- --SLPSSK-RTDG-MFLT-REGASGYLEAKRTRLF----- --SSA 94  
Veenstra\_2021|Octinsulin|Florometra\_serratissima|Ambulacraia/1-140 44 TLMDFCRSCVYATKRAHT----- --SLPSSK-RTDG-MFLT-REGASGYLEAKRTRLF----- --SSA 94  
Veenstra\_2021|Octinsulin|Lytechinus\_variegatus|Ambulacraia/1-149 44 QTIMSMCDSVCYASVD----- --KRTSKSSTYTPAKPFLHKNRAVHFLKSTREIENRPSIGDTAV- 101  
Veenstra\_2021|Octinsulin|Hemicentrotus\_pulcherrimus|Ambulacraia/1-150 44 QTIMSMCDSVCYASVD----- --KRTSKSSTYTPAKPFLHKNRAVHFLKSTREIENRPSIGDTAV- 101  
XP\_001175486.2|Octinsulin|Strongylocentrotus\_purpuratus|Ambulacraia/1-150 44 QTIMSMCDSVCYASVD----- --KRTSKSSTYTPAKPFLHKNRAVHFLKSTREIENRPSIGDTAV- 101  
MF4019962|Octinsulin|Apostichopus\_japonicus|Ambulacraia/1-151 46 ETVRAICDGCYAGGIHTR-FAF----- --KRS5SDIISLYKDPFLKSNALNLFLLP-RSHT----- --PS----- 98  
Veenstra\_2021|Octinsulin|Holothuria\_glaberrima|Ambulacraia/1-155 48 ETVRSVYVCGCVYAGGSHLSRNYL----- --KRS5HKEKIPFLFKEFLEISYALNELQAKSHA----- --SDDPS- 106

GDGM01056802.1|Octinsulin-2|Ptychodera\_flava|Ambulacraia/1-115 68 ---IQDEDLREKIRDKCCNRRCTIHKMMOFCCEARRNEFKFLALMGNTDN----- 115  
XP\_006815147.1|Octinsulin-2|Saccoglossus\_kovalevskii|Ambulacraia/1-117 66 ---YEEIVKQIKKACCKEYCPLEKIFIEFCDEQRQEFHQFMSSFASTEE----- 117  
Veenstra\_2021|Octinsulin-2|Schizocardium\_californicum|Ambulacraia/1-112 70 ---PDDQVVTAKVRVCCDNYCSLDKIEFCDEDLQEFQRFMSFVSNK----- 112  
Veenstra\_2021|Octinsulin-3|Schizocardium\_californicum|Ambulacraia/1-122 77 ---GDELINCCLRCTVLEKIHICREKQIELEYIILQSAWPLVDNQR----- 122  
XP\_006815146.1|Octinsulin-1|Saccoglossus\_kovalevskii|Ambulacraia/1-156 93 ---KRAIDGGLIECCYSQSLTHMITYCAEAVINEQVFINILGNTDESSENDDDDEESSVHED 156  
GDGM01306917.1|Octinsulin-1|Ptychodera\_flava|Ambulacraia/1-128 84 ---KRGLEDCCYRRNQLQKMMTYCCAEQRRELNFFSLLNKQDNGST----- 128  
Veenstra\_2021|Octinsulin-4|Ptychodera\_flava|Ambulacraia/1-119 72 ---AVARGSEERINIVECCRRYCTLSRRIQYCYEVOLEQIYVESRNEE----- 119  
Veenstra\_2021|Octinsulin-5|Ptychodera\_flava|Ambulacraia/1-116 68 ---QRPLRGIVECCRSFCTLERRIQYCYNVQARFAIKEMSKEMSKERGM----- 116  
XP\_006815148.1|Octinsulin-3|Saccoglossus\_kovalevskii|Ambulacraia/1-116 76 ---IRQSRGIEDECCYHTCTPERKIQYCYEVOLEQIYVESRNEE----- 116  
Veenstra\_2021|Octinsulin-6|Ptychodera\_flava|Ambulacraia/1-125 84 ---NKIQRGVDECCRGCTSLERKIQYCYEVOLEQIYVESRNEE----- 125  
GDGM01137961.1|Octinsulin-7|Ptychodera\_flava|Ambulacraia/1-126 85 ---KKMQDFIHECCYHTCTPERKIQYCYEVOLEQIYVESRNEE----- 126  
Veenstra\_2021|Octinsulin-3|Ptychodera\_flava|Ambulacraia/1-126 85 ---NKIQRGVDECCRGCTSLERKIQYCYEVOLEQIYVESRNEE----- 126  
GDGM01418242.1|Octinsulin-8|Ptychodera\_flava|Ambulacraia/1-126 85 ---NKIQRGVDECCRSRQKIQYCYEVOLEQIYVESRNEE----- 126  
g7806.t1\_Xenoturbella\_bocki\_insuline-like\_peptide\_c|Xenacoelomorpha/1-112 88 ---VGKRGVDECCLRGAVPEMMGYCC----- 112  
JXSR015001403.1|Octinsulin|Ophiothrix\_spiculata|Ambulacraia/1-144 97 TFLRNARNTHGLIDECCYHTCTPERKIQYCYEVOLEQIYVESRNEE----- 144  
Veenstra\_2021|Octinsulin|Amphiura\_filiformis|Ambulacraia/1-141 94 SFLRDSRQHRGLIDECCYHTCTPERKIQYCYEVOLEQIYVESRNEE----- 141  
Veenstra\_2021|Octinsulin|Ophioderma\_brevispinal|Ambulacraia/1-140 94 SFLRNTR-QHRGLIDECCYHTCTPERKIQYCYEVOLEQIYVESRNEE----- 140  
Veenstra\_2021|Octinsulin|Asterias\_rubens|Ambulacraia/1-132 91 ---GARGGIDECCLRCTNELMLYCEQEQRREYF5FVGLWLSRR----- 132  
Veenstra\_2021|Octinsulin|Pisaster\_ochraceus|Ambulacraia/1-132 91 ---GARRGIDECCLRCTNELMLYCEQEQRREYF5FVGLWLSRR----- 132  
XP\_022079235.1|Octinsulin|Acanthaster\_planci|Ambulacraia/1-132 91 ---TRRGIVDECCYHTCTPERKIQYCYEVOLEQIYVESRNEE----- 132  
XP\_038074081.1|Octinsulin|Patiria\_miniatia|Ambulacraia/1-133 92 ---STRRGIVDECCYHTCTPERKIQYCYEVOLEQIYVESRNEE----- 133  
Veenstra\_2021|Octinsulin|Anneissia\_japonica|Ambulacraia/1-147 98 LHLNHRQHETTNTVTECCYHTCTPERKIQYCYEVOLEQIYVESRNEE----- 147  
Veenstra\_2021|Octinsulin|Oligometra\_serripinna|Ambulacraia/1-140 95 VNLDRRHAKTNTVTECCYHTCTPERKIQYCYEVOLEQIYVESRNEE----- 140  
Veenstra\_2021|Octinsulin|Antedon\_mediterranea|Ambulacraia/1-140 95 VNLDRRHAKTNTVTECCYHTCTPERKIQYCYEVOLEQIYVESRNEE----- 140  
Veenstra\_2021|Octinsulin|Florometra\_serratissima|Ambulacraia/1-140 95 VNLDRRHAKTNTVTECCYHTCTPERKIQYCYEVOLEQIYVESRNEE----- 140  
Veenstra\_2021|Octinsulin|Lytechinus\_variegatus|Ambulacraia/1-149 102 MSVDRRSTGHRGFIHECCNKFCDPGEMLYCEQEQRREYF5FVGLWLSRR----- 149  
Veenstra\_2021|Octinsulin|Hemicentrotus\_pulcherrimus|Ambulacraia/1-150 103 VAVERRSTGNRGIHECCNKFCDPGEMLYCEQEQRREYF5FVGLWLSRR----- 150  
XP\_001175486.2|Octinsulin|Strongylocentrotus\_purpuratus|Ambulacraia/1-150 103 VAVERRSTGNRGIHECCNKFCDPGEMLYCEQEQRREYF5FVGLWLSRR----- 150  
MF4019962|Octinsulin|Apostichopus\_japonicus|Ambulacraia/1-151 99 ---SLIKRGIIRSSGFIHECCNKFCDPGEMLYCEQEQRREYF5FVGLWLSRR----- 151  
Veenstra\_2021|Octinsulin|Holothuria\_glaberrima|Ambulacraia/1-155 107 LMVQRSSGRGFIHECCNKFCDPGEMLYCEQEQRREYF5FVGLWLSRR----- 155