

Supplemental Material

Supplementary Figure S1. Three major bands recognized by scFv were severed from the SDS-PAGE gel (Fig. 6) for mass spectrometric analysis. (A-C) After alignment with SwissProt 2011 database, the matched amino acids of trypsin-digested fragments were shown in bold and the matched protein indicated that of zinc metalloproteinase-disintegrin acutolysin which is also called SVMP containing 609 amino acids. SVMP: snake venom metalloproteinase.

(A) Band m1 match peptide of **Zinc metalloproteinase-disintegrin acutolysin** (24%) shown in **Bold**

01 MIQVLLVTIC LAAPFYQGSS IILESGDVND YEVVYPRKVT ALPKGAVQQK
51 YEDAMQYEFK VNGEPVVLHL EKNKHLFSKD YSETHYSPDG REITINPPVE
101 DHCYYHGRIE NDGDSTASIS ACNGLKGNFK LQGETYLIEP MKLSDSEAHA
151 VFKYENVEKD EAPKMGVQTQ KWKSYEPIKK ISQLNLIPEQ QIYDPFKYVE
201 TVVVVDKAMV **TKYNGDLDKI** ITKMYEAANN **MNEMYRYMFF** RVVMVGLIHW
251 TEEDKITVKP DVDYTLNAFA EWRKTYLLAE **KKHDNAQLIT** GIDFRGSIIG
301 **YAYIGSMCHP** KRSVGIQDY SPINLVLAVI MAHEMGHNLG IHDDGYCYC
351 GGYPCIMGPS ISPEPSKFFS NCSYIQCWDF IMNHNPECID NEPLGTDIIS
401 PPLCGNELLE VGEECDGTP ENCQNECCDA ATCKLKS**GSQ** CGHGKCEQC
451 **KFRTSGTECR** ASMSECDPAE HCTGQSSECP ADVFHKNGEP CLDNYGYCYN
501 GNCPIMYHQC YALFGAEVYE AEDSCFESNK **KGNYGYCRK** ENGKKIPCAS
551 EDVKCGRLYC **KDDSPGQNNP** CKMFYSNDDE **HKGMVLPGTK** CADGKVCNSG
601 HCDVVTAY

(B) Band m2 match peptide of **Zinc metalloproteinase-disintegrin acutolysin** (37%) shown in **Bold**

01 MIQVLLVTIC LAAPFYQGSS IILESGDVND YEVVYPRKVT ALPKGAVQQK
51 YEDAMQYEFK VNGEPVVLHL EKNKHLFSKD YSETHYSPDG REITINPPVE
101 DHCYYHGRIE NDGDSTASIS ACNGLKGNFK LQGETYLIEP MKLSDSEAHA
151 VFKYENVEKD EAPKMGVQTQ KWKSYEPIKK ISQLNLIPEQ QIYDPFKYVE
201 TVVVVDKAMV **TKYNGDLDKI** ITKMYEAANN **MNEMYRYMFF** RVVMVGLIHW
251 TEEDKITVKP DVDYTLNAFA EWRKTYLLAE **KKHDNAQLIT** GIDFRGSIIG
301 **YAYIGSMCHP** KRSVGIQDY SPINLVLAVI MAHEMGHNLG IHDDGYCYC
351 GGYPCIMGPS ISPEPSKFFS NCSYIQCWDF IMNHNPECID NEPLGTDIIS
401 PPLCGNELLE VGEECDGTP ENCQNECCDA ATCKLKS**GSQ** CGHGKCEQC
451 **KFRTSGTECR** **ASMSECDPAE** HCTGQSSECP ADVFHKNGEP CLDNYGYCYN
501 GNCPIMYHQC YALFGAEVYE AEDSCFESNK **KGNYGYCRK** ENGKKIPCAS
551 EDVKCGRLYC **KDDSPGQNNP** CKMFYSNDDE **HKGMVLPGTK** CADGKVCNSG
601 HCDVVTAY

(C) Band m3 match peptide of **Zinc metalloproteinase-disintegrin acutolysin** (24%) shown in **Bold**

01 MIQVLLVTIC LAAPFYQGSS IILESGDVND YEVVYPRKVT ALPKGAVQQK
51 YEDAMQYEFK VNGEPVVLHL EKNKHLFSKD YSETHYSPDG REITINPPVE
101 DHCYYHGRIE NDGDSTASIS ACNGLKGNFK LQGETYLIEP MKLSDSEAHA
151 VFKYENVEKD EAPKMGVQTQ KWKSYEPIKK ISQLNLIPEQ QIYDPFKYVE
201 TVVVVDKAMV **TKYNGDLDKI** ITKMYEAANN **MNEMYRYMFF** RVVMVGLIHW
251 TEEDKITVKP DVDYTLNAFA EWRKTYLLAE **KKHDNAQLIT** GIDFRGSIIG
301 **YAYIGSMCHP** KRSVGIQDY SPINLVLAVI MAHEMGHNLG IHDDGYCYC
351 GGYPCIMGPS ISPEPSKFFS NCSYIQCWDF IMNHNPECID NEPLGTDIIS
401 PPLCGNELLE VGEECDGTP ENCQNECCDA ATCKLKS**GSQ** CGHGKCEQC
451 **KFRTSGTECR** **ASMSECDPAE** HCTGQSSECP ADVFHKNGEP CLDNYGYCYN
501 GNCPIMYHQC YALFGAEVYE AEDSCFESNK **KGNYGYCRK** ENGKKIPCAS
551 EDVKCGRLYC **KDDSPGQNNP** CKMFYSNDDE **HKGMVLPGTK** CADGKVCNSG
601 HCDVVTAY