

A/GS/KS/01042/2015 H5N3

"hemagglutinin"

"MEKIVLLLAVISLVKSDQICIGYHANNSTKQVDTIMEKNVTVTH
AQDILEKTHNGKLCDLNGVKPLILKDCSVAGWLLGNPMCDEFIRVPEWSYIVERANPA
NDLCYPGTLNDYEELKHLLSRINHFEKTLIIPRSSWPNHETSLGVSAACPYQGASSFF
RNVVWLIKKNDAYPTIKISYNNNTNREDLLILWGIHHSNNAAEQTNLYKNPDTYVSVGT
STLNQRLVPKIATRSQVNGQSGRMDFFWTILKPNDAIHFESNGNFIAPEYAYKIVKKG
DSTIMKSEMEYGHCNTKQCQTPIGAINSSMPFHNHPLTIGECPKYVKSNNLVLATGLR
NSPLRERRRRKRLFGAIAAGFIEGGWQGMVDGWYGYHHSNEQSGSYAADKESTQKAIDG
VTNKVNSIIDKMNTQFEAVGREFNLERRIENLNKKMEDGFLDVWTYNAELLVLMENE
RTLDFHDSNVKNLYDKVRLQLRDNAKELGNGCFEFYHKCDNECMESVRNGTYDYPKYS
EEAILKREEISGVKLESIGTYQILSIYSTVASSLALAIIVAGLSLWMCSNGSLQCRIC
I"

"neuraminidase"

"MNPNQKIITIGVVNTTLLSTIALLLIGIGNLIFNTVIHEKIGDHQT
VVYPTITAPVVPNCSDTTITYNNTTVVHNITTTIITEAEKHFKSSLPLCPFRGFFPFHK
DNAIRLGENKDVIPTREPYVSCDNDNCWSFALAQGALLGTHSNGTIKDRTPYRSLIR
FPIGTAPVLGNYKEICVAWSSSSCFDGKEWMHVCMTGNDNDASGQIYAGKMTDSIKS
WRKDILRTQESQCXIDGTCVVAVTDGPAANSADHRIYWIREGKVMKYENIPKTKIQH
LEECSCYVDIDVYICIRDNWKGSRPWRINNETILETGYVCSKFHSDTPRPADPSTV
SCDSPSNVNGGPGVKGFVKGTGDDVWLGRTVSTGGRSGFEIHKVTEGWINSNHAHSV
TQTLVSNNDWSGYSGSFIVENNGCFQPCFYIELIRGRPNKNDDVSWTSNSIVTFCGLD
NEPGSGNWPDGSNIGFMPK"

"nucleocapsid protein"

"MASQGTKRSEYQMETGGERQNATEIRASVGRMVGGIGRFYIQC
TELKLSDYEGRLIQNSITIERMVLSAFDERRNKYLEEHPSAGKDPKKTGGPIYRRRDG
KWMRELILYDKEEIRRIWRQANNGEDATAGLTHLMIWHSNLNDATYQRTALVRTGMD
PRMCSLMQGSTLPRRSGAAGAAVKGVGTMMELIRMIKRGINDRNFWRGENGRRRIA
YERMCNILKGKFQTAQRAMMDQVRESRNPNGNAEIEDLIFLARSALILRGSAHKSL
PACVYGLAVASGYDFEREYSLVGIDPFRLQNSQVPSLIRPNENPAHKSQLVWMACH
SAAFEDLRVSSFIRGTRVPRGQLSTRGVQIASNENMETMDSSTLELRSRYWAIRTS
GGNTNQQRASAGQISVQPTFSVQPSLPFERATIMAAFTGNTGRTSDMRTEIIRMES
ARPEDVSFQGRGVFELSDEKATNPVPSFDMSEGSYFFGDNAEEYDN"

"matrix protein 2"

"MSLLTEVETPTRTEWECRCDSSDPLVVAANIIGILHLILWILD
RLFFKCIYRLKYGLKIGPSTEGVPESMREEYRQEQQSAVDVDDGHFVNIELE"

"matrix protein 1"

"MSLLTEVETYVLSIIPSGPLKAEIAQRLEDVFAGKNTDLEALME
WLKTRPILSPLTKGILGFVFTLTVPSEGLQRRRFVQNALNGNGDPNNMDKAVKLYKK
LKREITFHGAKEVALSYSTGALASCMGLIYNRMGTVTTEVAFGLVCATCEQIADSQHR
SHRQMATITNPLIRHENRMVLASTTAKAMEQMAGSSEQASEAMEVANQARQMVQAMRT
IGTHPNSSAGLRDNLENLQAYQNRMGVQMQRFK"

"nuclear export protein"

"MDSNTVSSFQDILMRMSKLQLGSSSEGLNGMITQFESLKL YRDS
LGEAVMRMGDLHSLQNRNGKWREQLSQKFEEIRWLIEMRHLKTTENSFEQITFMQA
LQLLLEVEQEIRTFSFQLI"

"nonstructural protein 1"

"MDSNTVSSFQVDCFLWHVRKRFADQELGDAPFLDRLRRDQKSLR
GRGSTLGLDIETATRAGKQIVERILGEKSDEALKMNIA SVPTSRYLTDMTLEEMSRDW
FMLMPKQKVAGSLCIKMDQAIMDKTIILKANFSVIFDRLETILLRAFTEEGAIVGEI
SPLPSLPGHTDEDVKIAIGVLIGGLEWNDNTVRVSETLQRFTWRSSNEDGRPSLPSKQ
KRKMARTIESEVRGNKMAD"

"polymerase PA"

"MEDFVRQCFNPMIVELAEKTMKEYGENPKIETNKFAAICTHLEV
CFMYSDFFHIDERGKSIIVESGDPNALLKHRFEIIEGRDRTMAWTVVNSICNTTGVDK
PKFLPDLYDYKENRFIEIGVTRREVHTYYLEKANKIKSEKTHIHIFSFTGEEMATKAD
YTLDEESRARIKTRLFTIRQEMANRGLWDSFRQSERGEETIEERFEITGTMRRADQS
LPPNFSSLENFRA YVDGFKPNGCLEGKLSQMSKEVNARIEPFMKTTPRPLRLPDGPPC
SQRSKFLLMDSLKLSIEDPSHEGEGIPLYDAIKCMKTFFGWKEPNIVKPHVKGINPNY
LLAWKQVLAELQDIENEETIPKTKNMKKTSQKWLALGENMAPEKVDFFEDCRDVIDLRQ
YDSDEPEPRSLSSWIQSEFNKACELTDSSWIELDEIGEDVAPIEHASMRNYFTA EV
SHCRATEYIMKGVYINTALLNSSCAAMDDFQ LIPMISKCRTKEGRRKTNLYGFIKGR
SHLRNDTDVVNFVSMESLTDPRLEPHKWEKYCVLEIGDMLLRTAIGQVSRSMFLYVR
TNGTSKIKMKWGMEMRRCLLQSLQQIESMIEAESSVKEKDMTKEFFENKSETWPIGES
PKGVEESSIGKVCRTLLAKSVFNSLYASPQLEGFSAESRKL LLLIVQAFRDNLEPGTFD
LGGLYEAIEECLINDPWVLLNASWFNSFLTHALK"

"PA-X protein"

"MEDFVRQCFNPMIVELAEKTMKEYGENPKIETNKFAAICTHLEV
CFMYSDFFHIDERGKSIIVESGDPNALLKHRFEIIEGRDRTMAWTVVNSICNTTGVDK
PKFLPDLYDYKENRFIEIGVTRREVHTYYLEKANKIKSEKTHIHIFSFTGEEMATKAD
YTLDEESRARIKTRLFTIRQEMANRGLWDSFVNLREAKRQLKKGLKSQEP CAGLPTKA
SHRISPALKILEPMWMDSNRTAALRASFLKCQKK"

"polymerase PB1"

"MDVNPTLLFLKVPAQNAISTTFPYTGDPYPYSHGTGTGYTMDTVN
RTHQYSEKGKWTNTETGAPQLNPIDGPLPEDNEPSGYAQTDCVLEAMAFLEESHPI
FENSCLTMEIVQQTRVDKLTQGRQTYDWTLNRNQPAATALANTIEVFRSNGLTANES
GRLIDFLKDVME SMDKEEMEITTHFQRKRVRDNMTKKMVTQRTIGKKKQRLNKR SYL
IRALTNTMTKDAERGKLRRAIATPGMQIRGFVYFVETLARSICEKLEQSGLPVGGN
EKKAKLANVVRKMMTNSQDTELSFTITGDNTKWNENQNPRMFLAMITYITRNQPEWFR
NVLSIAPIMFSNKMARLGKGYMFESKSMKLRTQIPAEMLVNIDLKYFNESTRKKIEKI
RPLLDGTASLSPGMMMGMFNM LSTVLGVLSILNLGQKRYTKTTYWWDGLQSSDDFALI
VNAPNHEGIQAGVDRFYRTCKLVGINMSKKKSYINQGTGTFEFTSFFYRYGFVANFSME
LPSFGVSGINESADMSIGVTVIKNNMINNDLG PATAQMALQLFIKDYRYTYRCHRGDT
QIQTRRSFELKKLWEQTRSKAGLLVSDGGPNLYNIRNLHIPEVCLKWELMDE DYQGR L
CNPLNPFVSHKEIESVNNAVVM PAHGPAKSMEYDAVATTHSWIPKRNRSILNTSQRGI

LEDEQMYQKCCSLFEKFFPSSSYRRPVGISSMVEAMVSRARIDARIDFESGRIKKEEF
AEIMKICSTIEELRRQK"

"PB1-F2 protein"

"MEQEQDTPWTRSTEHINTQRKESGQQTQRPGHPNSTQLMDHYQR
TTSQADMHKRIACWKQWLSLKNPTQGSLKTLVLKRWKSFSKQEWTN"

"polymerase PB2"

"MERIKELRDLMSQSRTREILTKTTVDHMAIIKKYTSGRQEKNPA
LRMKWMMAMKYPIADKRIMEMIPERNEQGQTLWSKTNDAGSDRVMVSPLAVTWNNRN
GPTTSTVHYPKVYKTYFEKVERLKHGTFGPVHFRNQVKIRRRVDINPGHADLSAKEAQ
DVIMEVVPNEVGARILTSESQLTITKEKKEELQDCKIAPLMVAYMLERELVRKTRFL
PVAGGTSSVYIEVLHLTQGTCTWEQMYTPGGEVRNDDVDQSLIIAARNIVRRATVSADP
LASLLEMCHSTQIGGTRMVDILRQNPTEEQAVIDICKAAMGLRISSSFSGGFTFKRTS
GSSVKREEEVLGTNLQTLKIRVHEGYEEFTMVGRRATAILRKATRRLIQLIVSGRDEQ
SIAEAIIVAMVFSQEDCMIKAVRGDLNFVNRRANQRLNPMHQLLRHFQKDAKVLFFQNWG
IEPIDNVMGMIGILPDMPSTEMSLRGVRVSKMGVDEYSSTERVVVSIDRFLRVRDQR
GNVLLSPEEVSETQGTEKLITITYSSSMWEINGPESVLVNTYQWIIRNWETVQIQWSQ
DPTMLYNKMEFEPFQSLVPAARGQYSGFVRTLFQQMRDVLGTFDTVQIIKLLSFAAA
PPEQSRMQFSSLTVNVRGSGMRILVRGNSPVFNYNKATKRLTVLGKDAGALTEDEPDEG
TAGVESAVLRGLLILGKEDKRYGPALSINELSNLAKGEKANVLIGQGDVVLVMKRKRKRD
SSILTDSQTATKRIRMAIN"