

Streptococcus pyogenes Cas9
GenBank AKP81606

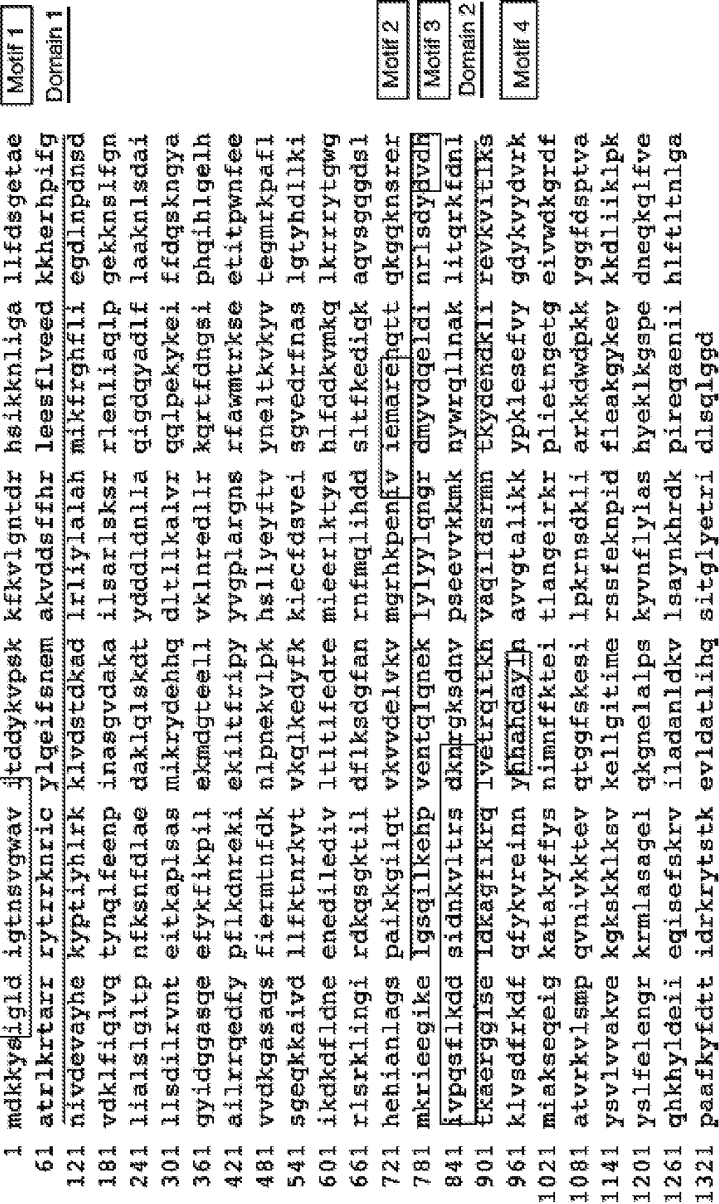


FIG. 1

Francisella tularensis subsp. novicida U112 Cpfl

1 msiyqefvnk yslsktlrlfe lipqgkltlen ikargllldd ekrakdykka kqiildkyhgf
61 fieeilssvc isedllqnys dvyfklkksd ddnlqkdfks akdtikkqis eyikdsekfk
121 nlfndqlida kkgesdlil wlqskdngi elfkansdit didealdik sfkgwttyfk
181 gfhenrknvy ssndiptsii yrivddnlpk flenkakyes lkkapeain yeqikkdaae
241 eltfdidykt sevnqrvfsl devfeianfn nylngsgitk fntiiggkfv ngentkrkgi
301 neyinlysqq indktlkkyk msvlfkqils dtesksfvid kledsdvvt tmqsfyeqia
361 afktveeksi ketlslilfad lkaqklidlak iefkndkalt dlsqgvfddy svigtavley
421 itqtiapkn1 dnpskkegel iakktekaky lsletiklal eefnkhrdid kqcrfeesila
481 nfaaipmifd elaqnkdnl qisikyngqg kkdllqasae ddvkaikdli dqtntlhlki
541 kifhisqsed kanildkdeh fylvfeecyf elanivplyn kirnyitqkp ysdekflnf
601 enstlangwd knkepdtai lfikdkyyi gwmakknki fddkaikenk gegykkivyk
661 llpgankmlp kvffsaksik fynpsedilr irnhsthtkn gspdkgyekf efniedarkf
721 idfykqsisk hpewkdfgr fsdtarynsi defyrevenq gykltfenis esyidsvvnq
781 gklylfqiyn kdfsayskgr pnltlywka lfdernlqdv vykingeael fyrrksipkk
841 ithpakeaia nknkdnpkke svfeydlikd krftedkfff hcpitinfks sgankfndei
901 nlillekand vhlisidrg rhlavytlvd gkgnliikqdt fnliigndrmk tnyhdklaai
961 ekdrdsarkd wkinnikem kegylsqvvh eiaklvieyn aivvfedlnf gfkrgrikve
1021 kvvyqklekm lieklnylvf kdnefdktgg vlrayqitap fetfkkmgkq tgiilyvypag
1081 ftskicpvtg fvnqlypkve svksqseffs kfdkiocynld kgyfefsfdy knfgdkaakg
1141 kwtiasefgr linfrnsdkn hnwdtrevyp tkeleklikd ysieyghgec ikaaicgesd
1201 kkffakltsv lntilqmns ktgteldyli spvadvnqnf fdsrqapknm pqdadangay
1261 higlkqlml1 griknngqk klnlviknee yfefvqnrnn

FIG. 2

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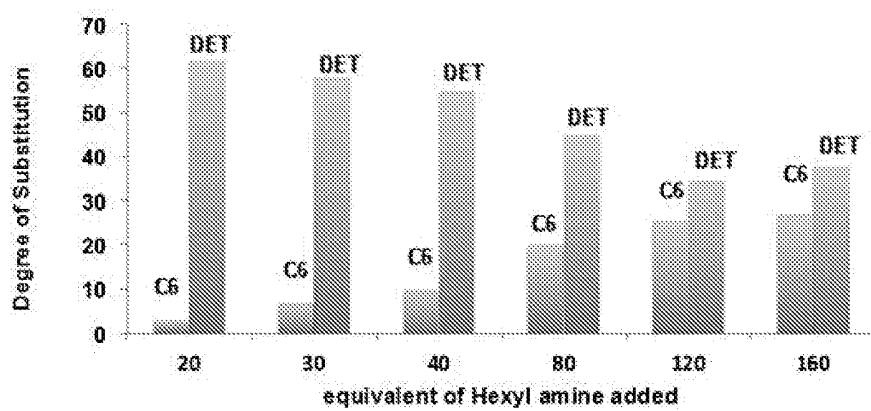


FIG. 3

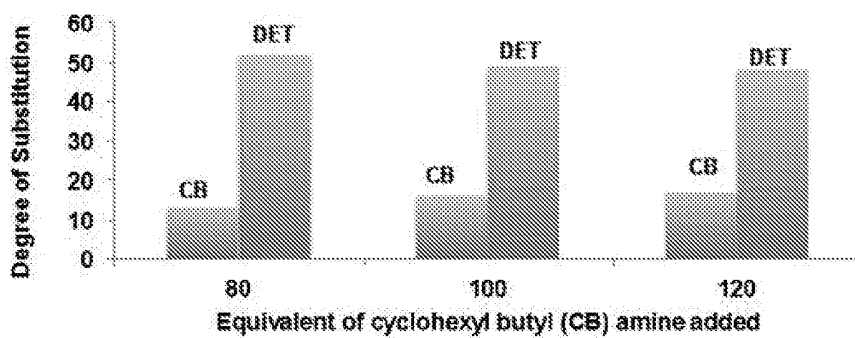
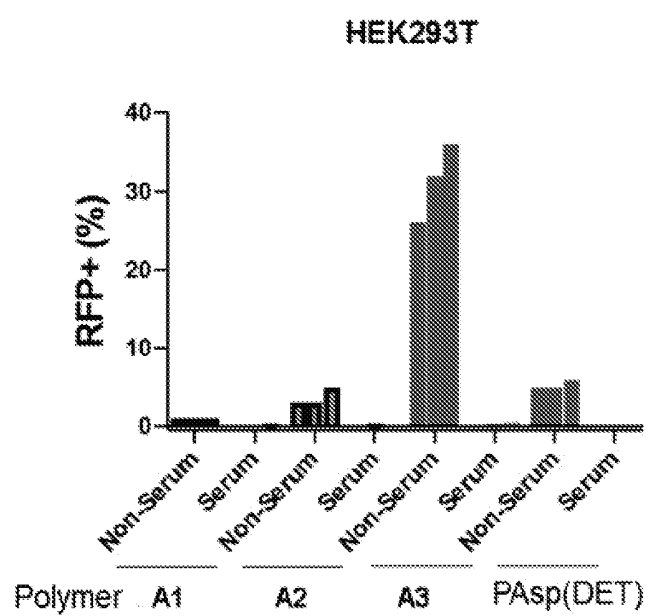
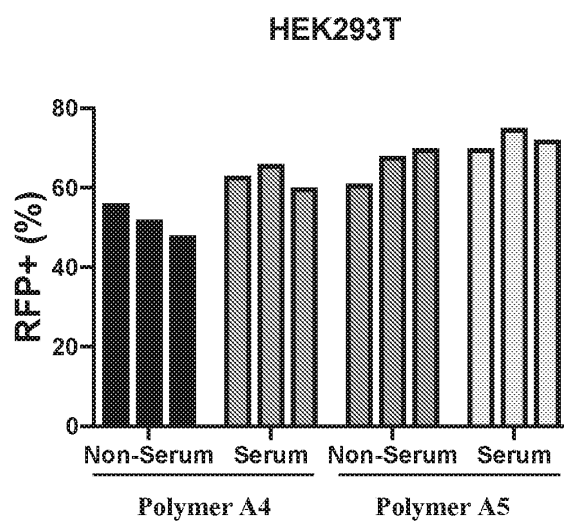
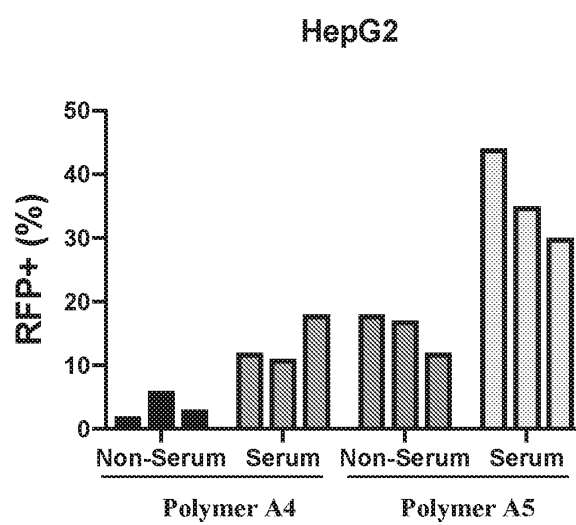


FIG. 4

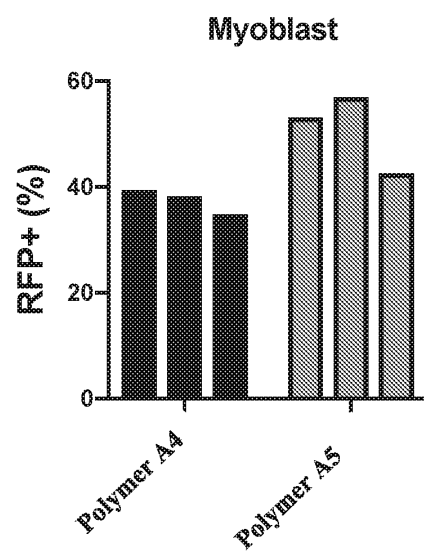
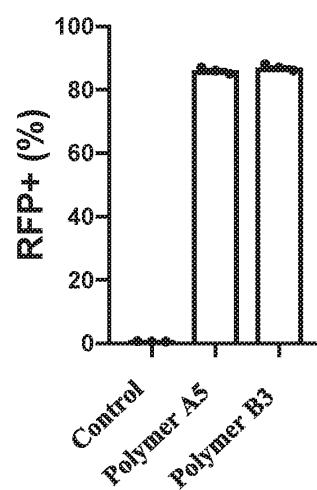
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**FIG. 5**

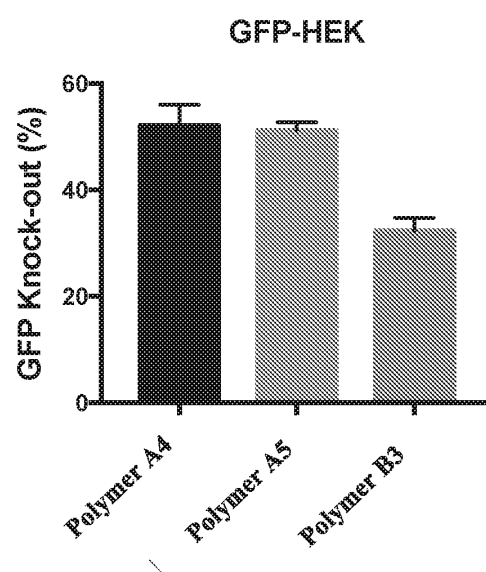
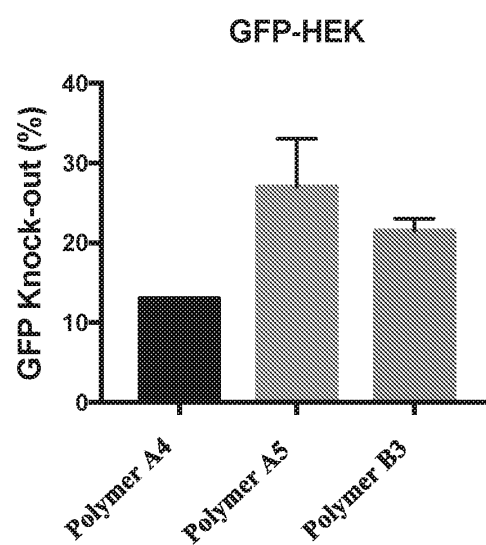
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**FIG. 6****FIG. 7**

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**FIG. 8****FIG. 9**

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**FIG. 10****FIG. 11**

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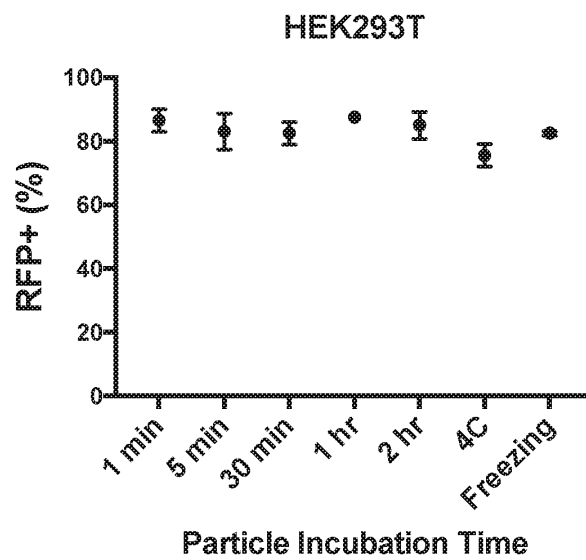


FIG. 12

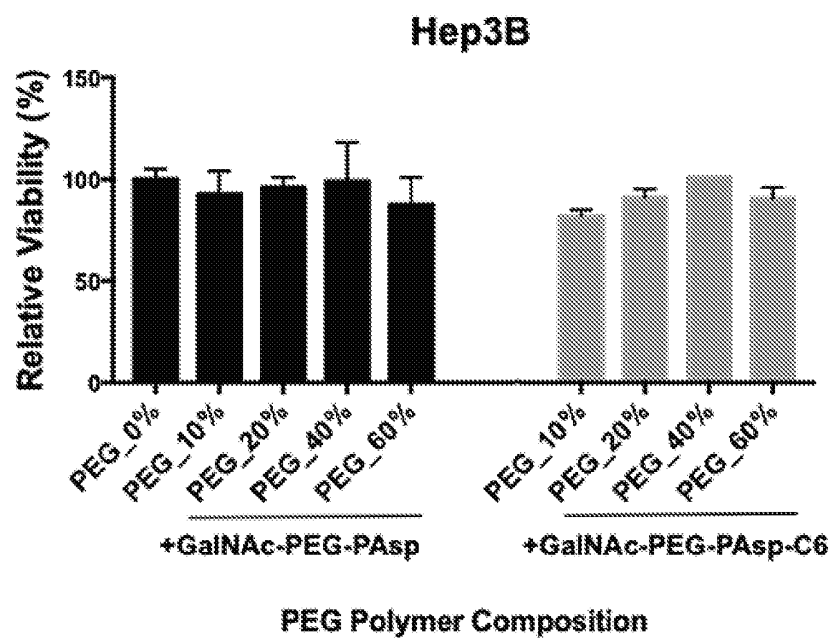


FIG. 13

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AsCpfl

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1  mtqfegftnl yqvsktlrfe lipggktlkh iqeggfieed karndhykel kpiidriykt
61  yadqclqlvq ldwenlsaaai dsyrkektee trnalieeqa tyrnaihdyf igrtdnltda
121 inkrrhaeiyy glfkaelfng kvikqlgtvt ttehenallr sdfkfttyfs gfyenrknvf
181 saedistaip hrivqdnfnpk fkenchiftr litavpslre hfenvkkaig ifvstsieev
241 fsfpfynqll tqtdidlyng llggisreag tekikqlnev lnlaigknde tahilaslph
301 rfipflfkqil sdrntlsfil eefksdeevi qsfckyktll rnenvletae alfnelnsid
361 lthifishkk letissalcd hwdtlrnaly erriseltgk itksakekvq rslkhedinl
421 qeiiisaagke lseafkqkts eilshahaal dqplpttlkk geekeilksq ldelglyhl
481 ldwfavdesn evdpefsarl tgiklemeps lsfnkarny atkkpysvek fklmfqmpsl
541 asgwdivnkek nngailfvkn glyylgimpk qkgrykalsf eptektsege dkmyydyfpe
601 aakmipkcest qlkavtahfq thttpillsn nfiepleitk eiylndlnpek epkkfqtaya
661 kktgdqkgyr ealckwidft rdflskytkd tsidlsslrp ssqykdlgey yaenpllyh
721 isfgriaeke imdavetgkl ylfqiynkdf akghhgkpnl htlywtglfs penlaksik
781 lnggaelfyr pksrmkrmah rlgekmlnkk lkdqktpipd tlyqelydyv nhrishdlsd
841 earallpnvi tkevsheiiik drftsdkff fhvptllyq aanspskfng rvnaylkehp
901 etpiigidrg ernliytvi dstgkileqr slntiqgfdy qkkldnreke rvaargawsv
961 vgtikdlkqg ylsqviheiv dlmihyqavv vlenlnfgfk skrtgiaeka vyqqfekmli
1021 dklncilvlkd ypaekvggvl npyqltdqft sfakmgtqsg flfyvpapyt skidpltgfv
1081 dpfvwktikn hesrkhfleg fdflyhdykt gdfilhfkmn rnlsfgrglp gfm pawdivf
1141 eknetqfdak gtpfiagkri vpvienhrft gryrdlypan elialleekg ivfrdgsnil
1201 pkllenddsh aidtmvalir svlgmrnsna atgedyinsp vrdlngvcfd srfqnpewpm
1261 dadangayhi alkqqlllnh lkeskdiklq ngisnqdwla yiqelrn

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FIG. 14

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LbCpfI

AASKLEKFTNCYSLSKTLRFKAIPVGKTQENIDNKRLLEVEDEKRAEDYKGVKKLLDRYYL
SFINDVLHSIKLKNLNNYISLFRKKTRTEKENKELENLEINLRKEIAKAFKGAAGYKSLF
KKDIIETILPEAADDKDEIALVNSFNFGFTTAFTGFFDNRENMFSEEAKSTSIAFRGINEN
LTRYISNMDFEKFVDAIFDKHEVQEIKEKILNSDYDVEDFFEGEFFNFVLTQEGIDVYNA
IIGGFVTESGEKIKGLNEYINLYNAKTKQALPKFKPLYKQVLSDRSLSFYGEGYTSDEE
VLEVFRTNLNKNSEIFSSIKKLEKLFKNFDEYSSAGIFVKNNGPAISTISKDIFGEWNLIR
DKWNAEYDDIHLKKKAVVTEKYEDDRRSFKKIGSFSLEQLQEYADADLSVVEKLKEIII
QKVDEIYKVYGSSEKLFDAFVLEKSLKKNDAVVAIMKDLLDSVKSFENYIKAFFGEGKE
TNRDESFGDFVLAYDILLKVDHIYDAIRNYVTQKPYSKDKFKLYFQNPQFMGGWDKKE
TDYRATILRYGSKYYLAIMDKKYAKCLQKIDKDDVNGNYEKINYKLLPGPNKMLPKVFFS
KKWMAYYNPSEDIQKIYKNGTFKKGDMFNLNDCHKLIDFFKDSISRYPKWSNAYDFNFSE
TEKYKDIAGFYREVVEEQGYKVSFESASKKEVDKLVBEGLYMFQIYNKDFSDKSHGTPNL
HTMYFKLLFDENNHGQIRLSGGAELEFMRRASLKKELVHPANSPIANKNPDNPKKT'TTL
SYDVYKDKRFSEDQYELHIPAIANKCPKNIFKINTEVRVLLKHDDNPYVIGIDRGERNLL
YIVVVDGKGNIVEQYSLNEIINNFGIRIKTDYHSLLDKKEKERFEARQNWTSIENIKEL
KAGYISQVVHKICELVEKYDAVIALEDLNSGFKNSRVKVEKQVYQKFEKMLIDKLNMYVD
KKSNPCATGGALKGYQITNKFESFKSMSTQNGFIFYIPAWLTSKIDPSTGFVNLLKTKYT
SIADSKKFISFDRIMYVPEEDLFEFALDYKNFSRTDADYIKKWKLYSYGNRIRIFAAAK
KNNVFAWEVCLTSAYKELFNKYGINYQQGDIRALLCEQSDKAFYSSFMALMSLMLQMRN
SITGRTDVDFLISPVKNSDGIFYDSRNYEAQENAILPKNADANGAYNIARKVLWAIQQFK
KADEKLDKVKIAISNKEWLEYAQTSVK

FIG. 15

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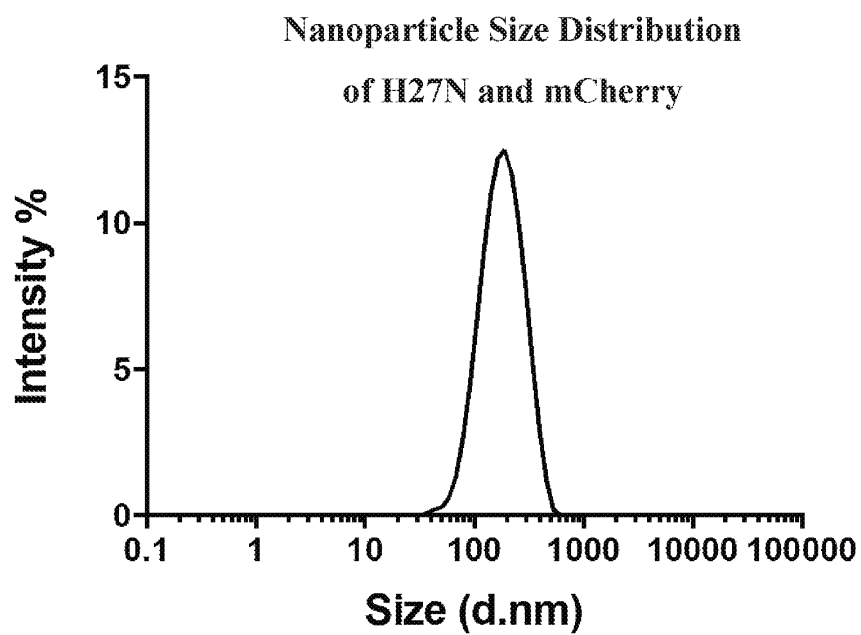


FIG. 16

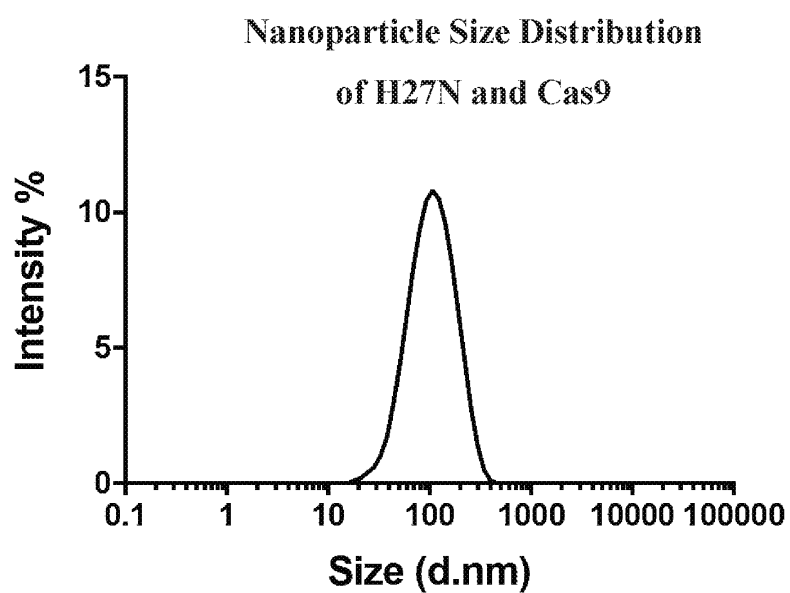


FIG. 17

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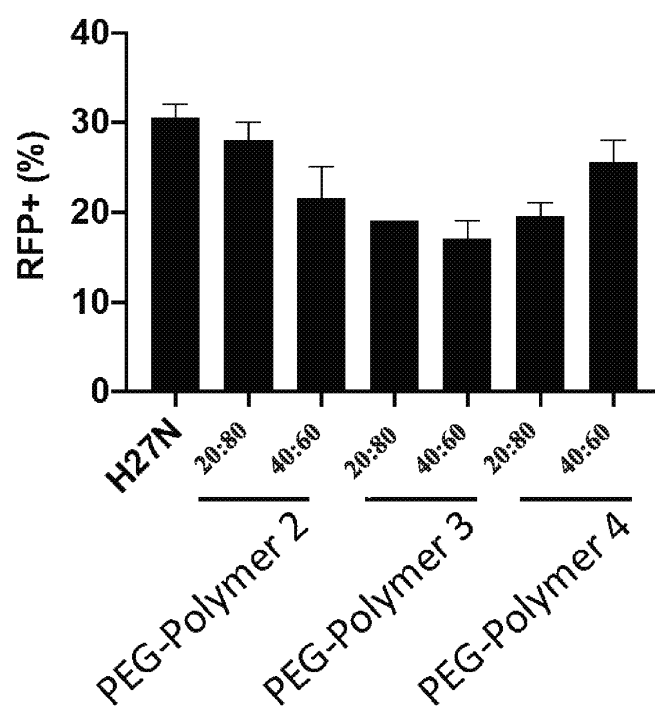


FIG. 18

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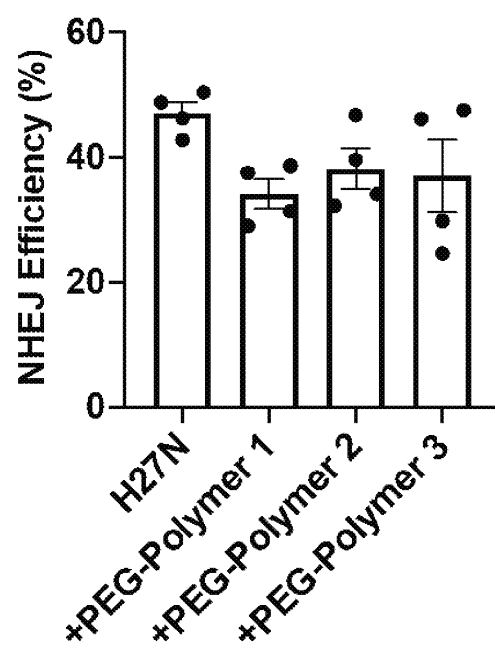


FIG. 19

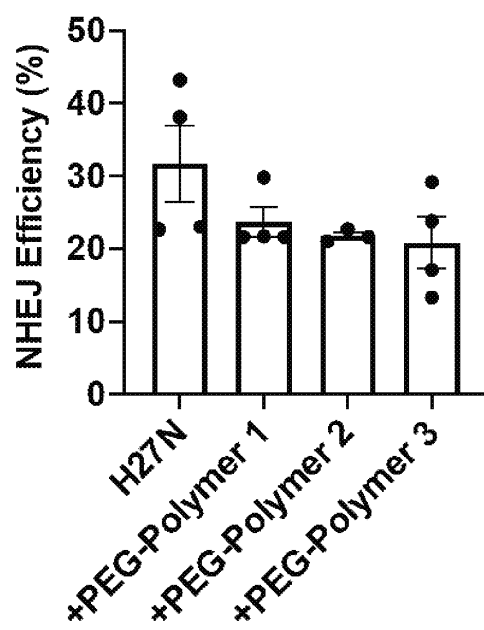


FIG. 20

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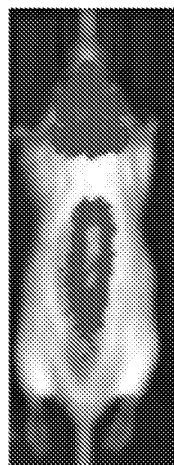


FIG. 21



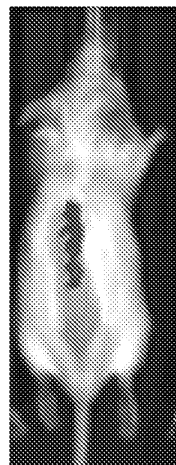
Control H27N and Cre mRNA

FIG. 22A



H27N and Cre mRNA

FIG. 22B



H27N and Cre mRNA

FIG. 22C

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FIG. 23

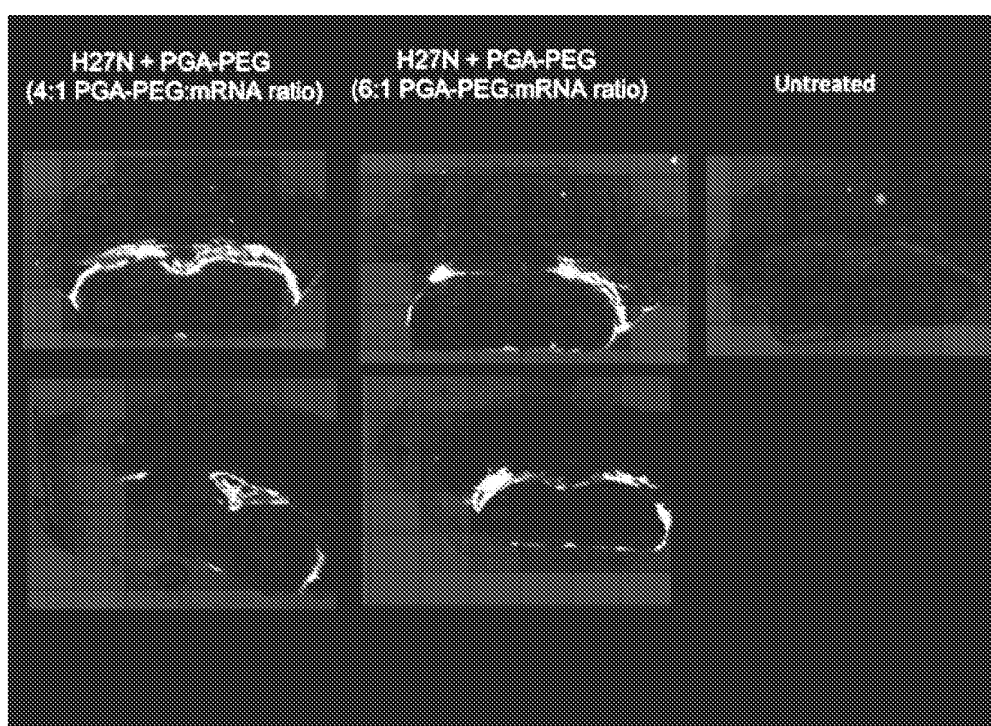


FIG. 24

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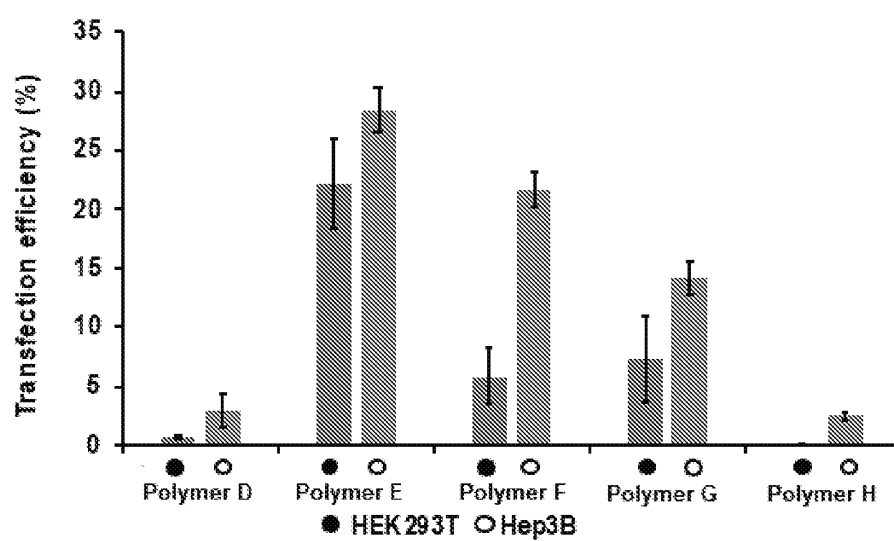


FIG. 25