

<110> HANMI PHARM. CO., LTD.
 HANMI FINE CHEMICAL CO., LTD.

<120> Polyethylene glycol derivatives, composition comprising the same
 and processes for preparing biological active polypeptide
 conjugate using the same

<130> PN129030

<160> 4

<170> KoPatentIn 3.0

<210> 1
 <211> 34
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Human Glucagon-like peptide-2 derivative

<220>
 <221> MISC_FEATURE
 <222> (1)
 <223> Xaa is 4-imidazoacetyl (CA)

<400> 1
 Xaa Gly Asp Gly Ser Phe Ser Asp Glu Met Asn Thr Ile Leu Asp Asn
 1 5 10 15
 Leu Ala Ala Arg Asp Phe Ile Asn Trp Leu Ile Gln Thr Arg Ile Thr
 20 25 30
 Asp Lys

<210> 2
 <211> 221
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Human Immunoglobulin Fc fragment

<400> 2
 Pro Ser Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu

1	5	10	15
Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu	20	25	30
Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln	35	40	45
Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys	50	55	60
Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu	65	70	75
Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys	85	90	95
Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys	100	105	110
Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser	115	120	125
Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys	130	135	140
Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln	145	150	155
Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly	165	170	175
Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln	180	185	190
Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn	195	200	205
His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys	210	215	220

<210> 3
 <211> 40
 <212> PRT
 <213> Artificial Sequence

<220>

<223> imidazoacetyl-Exendin-4

<220>

<221> MISC_FEATURE

<222> (1)

<223> Xaa is 4-imidazoacetyl (CA)

<220>

<221> MISC_FEATURE

<222> (40)

<223> Xaa is NH2

<400> 3

Xaa Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Xaa
35 40

<210> 4

<211> 174

<212> PRT

<213> Artificial Sequence

<220>

<223> granulocyte colony stimulating factor, GCSF

<400> 4

Thr Pro Leu Gly Pro Ala Ser Ser Leu Pro Gln Ser Phe Leu Leu Lys
1 5 10 15

Ser Leu Glu Gln Val Arg Lys Ile Gln Gly Asp Gly Ala Ala Leu Gln
20 25 30

Glu Lys Leu Cys Ala Thr Tyr Lys Leu Cys His Pro Glu Glu Leu Val
35 40 45

Leu Leu Gly His Ser Leu Gly Ile Pro Trp Ala Pro Leu Ser Ser Cys
50 55 60

Ser Ser Gln Ala Leu Gln Leu Ala Gly Cys Leu Ser Gln Leu His Ser
65 70 75 80

Gly	Leu	Phe	Leu	Tyr	Gln	Gly	Leu	Leu	Gln	Ala	Leu	Glu	Gly	Ile	Ser			
				85					90					95				
Pro	Glu	Leu	Gly	Pro	Thr	Leu	Asp	Thr	Leu	Gln	Leu	Asp	Val	Ala	Asp			
			100					105					110					
Phe	Ala	Thr	Thr	Ile	Trp	Gln	Gln	Met	Glu	Glu	Leu	Gly	Met	Ala	Pro			
		115					120					125						
Ala	Leu	Gln	Pro	Thr	Gln	Gly	Ala	Met	Pro	Ala	Phe	Ala	Ser	Ala	Phe			
	130					135					140							
Gln	Arg	Arg	Ala	Gly	Gly	Val	Leu	Val	Ala	Ser	His	Leu	Gln	Ser	Phe			
145					150					155					160			
Leu	Glu	Val	Ser	Tyr	Arg	Val	Leu	Arg	His	Leu	Ala	Gln	Pro					
				165					170									