

GMP Grade available? ✓  
 HEK293 human-cell expressed? ✓  
 Authentic human proteins? ✓

Native human folding & glycosylation? ✓  
 Animal, xeno, endotoxin and tag-free? ✓  
 High activity cytokines & growth factors? ✓

High purity? ✓  
 Manufactured in the USA? ✓  
 Expensive? ✗

## Cancer Research

Recombinant Protein	Cat no.
BMP-4	HZ-1045
GM-CSF	HZ-1002
IFN alpha 2A	HZ-1066
IFN alpha 2B	HZ-1072
IFN-gamma	HZ-1301
IL-1 beta	HZ-1164
IL-1 beta	HZ-1164
IL-2	HZ-1015
IL-4	HZ-1004
IL-6	HZ-1019
IL-7	HZ-1281
IL-10	HZ-1145
IL-12	HZ-1256
IL-17A	HZ-1113
TGF-beta 1	HZ-1011

## COVID-19

Recombinant Protein	Cat no.
GM-CSF	HZ-1002
IFN-beta	HZ-1298
IFN-gamma	HZ-1301
IL-1 beta	HZ-1164
IL-2	HZ-1015
IL-4	HZ-1004
IL-6	HZ-1019
IL-10	HZ-1145
IL-17A	HZ-1113
IL-17F	HZ-1116
TNF-alpha	HZ-1014

## Cardiovascular Research

Recombinant Protein	Cat no.
Beta NGF	HZ-1222
BMP-4	HZ-1045
FGF basic TS	HZ-1285
FGF-4	HZ-1218
FGF-7 (KGF)	HZ-1100
G-CSF	HZ-1207
GDNF	HZ-1311
IFN-gamma	HZ-1301
IL-1 beta	HZ-1164
IL-6	HZ-1019
IL-17A	HZ-1113
IL-17F	HZ-1116
LEFTY 1	HZ-1109
OSM	HZ-1030
PDGFaa	HZ-1215
PDGFbb	HZ-1308
pro IGF-2	HZ-1161
TGF-beta 1	HZ-1011
TGF-beta 3	HZ-1090
Thrombin (coagulation factor II)	HZ-3010
TNF-alpha	HZ-1014
VEGF-121	HZ-1204
VEGF-165	HZ-1308

## Immunology

Recombinant Protein	Cat no.
Beta NGF	HZ-1222
FGF-7 (KGF)	HZ-1100
Flt3-ligand	HZ-1151
GM-CSF	HZ-1002
HGH	HZ-1007
HSA	HZ-3001
IFN-alpha 2A	HZ-1066
IFN-alpha 2B	HZ-1072
IFN-beta	HZ-1298
IFN-gamma	HZ-1301
IL-1 beta	HZ-1164
IL-2	HZ-1015
IL-3	HZ-1074
IL-4	HZ-1004
IL-6	HZ-1019
IL-7	HZ-1281
IL-9	HZ-1240
IL-10	HZ-1145
IL-12	HZ-1256
IL-17A	HZ-1113
IL-17F	HZ-1116
IL-23	HZ-1254
IL-27	HZ-1275
IL-28A	HZ-1235
IL-28B	HZ-1245
IL-29	HZ-1156
IL-34	HZ-1316
LEFTY 1	HZ-1109
M-CSF	HZ-1192
OSM	HZ-1030
TGF-beta 1	HZ-1011
TGF-beta 2	HZ-1092
TNF-alpha	HZ-1014
TPO	HZ-1248

## Neuroscience

Recombinant Protein	Cat no.
Beta NGF	HZ-1222
BMP-2	HZ-1128
Cystatin C	HZ-1211
FGF basic TS	HZ-1285
FGF-4	HZ-1218
FGF-7	HZ-1100
FGF-8B	HZ-1103
G-CSF	HZ-1207
GDNF	HZ-1311
HGF	HZ-1084
IL-4	HZ-1004
IL-6	HZ-1019
IL-10	HZ-1145
LEFTY 1	HZ-1109
LIF	HZ-1292
Noggin	HZ-1118
OSM	HZ-1030
PDGF-aa	HZ-1215
PDGF-bb	HZ-1308
pro IGF-2	HZ-1161
Sonic Hedgehog (SHH)	HZ-1306
TGF-beta 1	HZ-1011
TNF-alpha	HZ-1014
VEGF-121	HZ-1204
VEGF-165	HZ-1308

## Stem Cells

Recombinant Protein	Cat no.
Activin A	HZ-1138
BMP-2	HZ-1128
BMP-4	HZ-1045
BMP-7	HZ-1229
EPO	HZ-1168
FGF basic TS	HZ-1285
FGF-4	HZ-1218
FGF-7	HZ-1100
FGF-8B	HZ-1103
Flt3/FLK-2 ligand	HZ-1151
G-CSF	HZ-1207
GDNF	HZ-1311
GM-CSF	HZ-1002
HGF	HZ-1084
IFN-gamma	HZ-1301
IL-1 beta	HZ-1164
IL-2	HZ-1015
IL-3	HZ-1074
IL-4	HZ-1004
IL-6	HZ-1019
IL-7	HZ-1281
IL-10	HZ-1145
IL-12	HZ-1256
LIF	HZ-1292
M-CSF	HZ-1192
Noggin	HZ-1118
OSM	HZ-1030
PDGFaa	HZ-1215
PDGFbb	HZ-1308
pro IGF-2	HZ-1161
SCF	HZ-1024
Sonic Hedgehog (SHH)	HZ-1306
TGF-beta 1	HZ-1011
TGF-beta 2	HZ-1092
TGF-beta 3	HZ-1090
Thrombin (coagulation factor II)	HZ-3010
TNF-alpha	HZ-1014
TPO	HZ-1248
VEGF-121	HZ-1204
VEGF-165	HZ-1308
Wnt3A	HZ-1296

\*Additional product information on next side.

# HumanKine® Cytokines and Growth Factors

To facilitate a seamless transition from pre clinical to clinical studies, both Research Grade and GMP Grade HumanKine cytokines and growth factors are manufactured through the same production process, minimizing variability in performance between Research Grade and GMP Grade products.

Though Research Grade and GMP Grade products go through the same production process, GMP Grade products undergo a more rigorous quality check and there is more extensive documentation for traceability and transparency for regulatory requirements.



Target	Cat no.	Activity (EC50)	Purity	Source
Activin A	HZ-1138	≤ 5 ng/mL	>95%	HEK293
beta NGF	HZ-1222	≤ 3 ng/mL	>95%	HEK293
BMP-2	HZ-1128	≤ 60 ng/mL	>95%	HEK293
BMP-4	HZ-1045	≤ 10 ng/mL	>95%	HEK293
BMP-7	HZ-1229	≤ 100 ng/mL	>95%	HEK293
Cystatin C	HZ-1211	≤ 5 μM IC50	>95%	HEK293
EPO	HZ-1168	≤ 2.5 ng/mL	>95%	HEK293
FGF-4	HZ-1218	≤ 1.25 ng/mL	>95%	HEK293
FGF-7 (KGF)	HZ-1100	≤ 7.5 ng/mL	>95%	HEK293
FGF-8b	HZ-1103	≤ 10 ng/mL	>95%	HEK293
FGF Basic-TS	HZ-1285	≤ 0.5 ng/mL	>95%	HEK293
FLT3 Ligand	HZ-1151	≤ 0.8 ng/mL	>95%	HEK293
G-CSF	HZ-1207	≤ 0.1 ng/mL	>95%	HEK293
GDNF	HZ-1311	≤ 10 ng/mL	>95%	HEK293
GM-CSF	HZ-1002	≤ 0.5 ng/mL	>95%	HEK293
HGF	HZ-1084	≤ 20 ng/mL	>95%	HEK293
HGH	HZ-1007	≤ 0.5 ng/mL	>95%	HEK293
HSA	HZ-3001	On request	>95%	HEK293
IFN alpha 2A	HZ-1066	≤ 0.4 ng/mL	>95%	HEK293
IFN alpha 2B	HZ-1072	≤ 0.12 ng/mL	>95%	HEK293
IFN beta	HZ-1298	≤ 0.1 ng/mL	>95%	HEK293
IFN gamma	HZ-1301	≤ 0.05 ng/mL	>95%	HEK293
IL-1 beta	HZ-1164	≤ 0.05 ng/mL	>95%	HEK293
IL-2	HZ-1015	≤ 5 ng/mL	>95%	HEK293
IL-3	HZ-1074	≤ 2 ng/mL	>95%	HEK293
IL-4	HZ-1004	≤ 0.6 ng/mL	>95%	HEK293
IL-6	HZ-1019	≤ 0.5 ng/mL	>95%	HEK293
IL-7	HZ-1281	≤ 1 ng/mL	>95%	HEK293
IL-9	HZ-1240	≤ 1 ng/mL	>95%	HEK293

Target	Cat no.	Activity (EC50)	Purity	Source
IL-10	HZ-1145	≤ 1.5 ng/mL	>95%	HEK293
IL-12	HZ-1256	≤ 2 ng/mL	>95%	HEK293
IL-17A	HZ-1113	≤ 2 ng/mL	>95%	HEK293
IL-17F	HZ-1116	≤ 10 ng/mL	>95%	HEK293
IL-23	HZ-1254	≤ 4 ng/mL	>95%	HEK293
IL-27	HZ-1275	≤ 12 ng/mL	>95%	HEK293
IL-28A	HZ-1235	≤ 5 ng/mL	>95%	HEK293
IL-28B	HZ-1245	≤ 1 ng/mL	>95%	HEK293
IL-29	HZ-1156	≤ 5 ng/mL	>95%	HEK293
IL-34	HZ-1316	On request	>95%	HEK293
LEFTY-1	HZ-1109	≤ 40 ng/mL	>95%	HEK293
LIF	HZ-1292	≤ 0.2 ng/mL	>95%	HEK293
M-CSF	HZ-1192	≤ 4 ng/mL	>95%	HEK293
Noggin	HZ-1118	≤ 15 ng/mL	>95%	HEK293
OSM	HZ-1030	≤ 1 ng/mL	>95%	HEK293
PDGFaa	HZ-1215	≤ 10 ng/mL	>95%	HEK293
PDGFbb	HZ-1308	≤ 3 ng/mL	>95%	HEK293
Pleiotrophin-PTN	HZ-1278	On request	>95%	HEK293
prolGF-II	HZ-1161	≤ 50 ng/mL	>95%	HEK293
SCF	HZ-1024	≤ 25 ng/mL	>95%	HEK293
Sonic Hedgehog-SHH	HZ-1306	≤350 ng/mL	>90%	HEK293
TGF beta 1	HZ-1011	≤ 0.5 ng/mL	>95%	HEK293
TGF beta 2	HZ-1092	≤ 0.5 ng/mL	>95%	HEK293
TGF beta 3	HZ-1090	≤ 0.5 ng/mL	>95%	HEK293
Thrombin-Coagulation Factor II	HZ-3010	On request	>95%	HEK293
Thrombopoietin	HZ-1248	≤ 5 ng/mL	>95%	HEK293
TNF alpha	HZ-1014	≤ 0.5 ng/mL	>95%	HEK293
VEGF121	HZ-1204	≤ 15 ng/mL	>95%	HEK293
VEGF165	HZ-1038	≤ 5 ng/mL	>95%	HEK293
Wnt3A	HZ-1296	≤ 20 ng/mL	>90%	HEK293

Browse the full product range online at [ptglab.com](https://ptglab.com)