GE Healthcare

HyClone™ sera

Growth factors in HyClone serum products

For more than 30 years, we have strived to further define serum components for cell culture applications. In this process, several growth factors in various bovine sera were measured. Table 1 gives descriptions of tested serum products. Results are presented in Table 2 and Figures 1–3.

Table 1. Descriptions of tested serum products

Serum	Description	Product code
Defined Fetal Bovine Serum, US Origin	Our highest quality fetal bovine serum (FBS) produced from fetal blood and triple filtered through serial 40 nm pore size-rated filters.	SH30070
Charcoal/Dextran Treated Fetal Bovine Serum, US Origin	Defined FBS treated in a proprietary charcoal/dextran process to reduce steroid hormone levels	SH30068
Dialyzed Fetal Bovine Serum, US Origin	Defined FBS dialyzed against normal saline using a M_r 10 000 molecular weight cutoff membrane	SH30079
Iron-Supplemented Bovine Calf Serum, US Origin	High-quality bovine calf serum (BCS) produced from blood collected from formula fed veal animals generally ranging in age from 16 to 22 weeks, and supplemented with iron	SH30072
Cosmic Calf™ Serum, US Origin	High-quality BCS produced from blood collected from formula fed veal animals generally ranging in age from 16 to 22 weeks, and with a proprietary supplementation	SH30087
FetalClone™ I, US Origin	Cost-efficient alternative to FBS produced from specially processed BCS blended with FBS and supplemented with a proprietary formulation of defined components optimized for hybridoma culture	SH30080
FetalClone II, US Origin	Cost-efficient alternative to FBS produced from specially processed BCS blended with FBS and supplemented with a proprietary formulation of defined components optimized for Chinese hamster ovary (CHO) cell culture	SH30066
FetalClone III, US Origin	Cost-efficient alternative to FBS produced from specially processed BCS blended with FBS and supplemented with a proprietary formulation of defined components optimized for fibroblast culture	SH30109
Newborn Bovine Calf Serum, US Origin	High-quality BCS produced from blood collected from animals typically less than 10 days old	SH30118
Donor Adult Bovine Serum, US Origin	High-quality adult bovine serum produced from blood collected from adult donor animals	SH30075

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Table 2. Growth factor levels in various HyClone bovine serum products

Growth factor	Defined FBS	Charcole/ dextran FBS	Dialyzed FBS	Iron-Suppl. BCS	Cosmic Calf Serum	FetalClone I	FetalClone II	FetalClone III	Newborn BCS	Adult Bovine Serum
IGF-1 (ng/mL)	111	49.3	98.7	345.3	344	194	214.3	136	70	212
TGF-beta (ng/mL)	12.6	7.3	12.3	20.9	22.7	2.7	3.0	2.7	15.9	18.3
FGF-2 (pg/mL)	37.3	32.7	43.3	ND–1.4*	1.4	7.8	8.1	6.2	22.5	ND

Results are average from three lots. ND = not detected.
*Two lots were undetectable and one was 1.4 pg/mL.

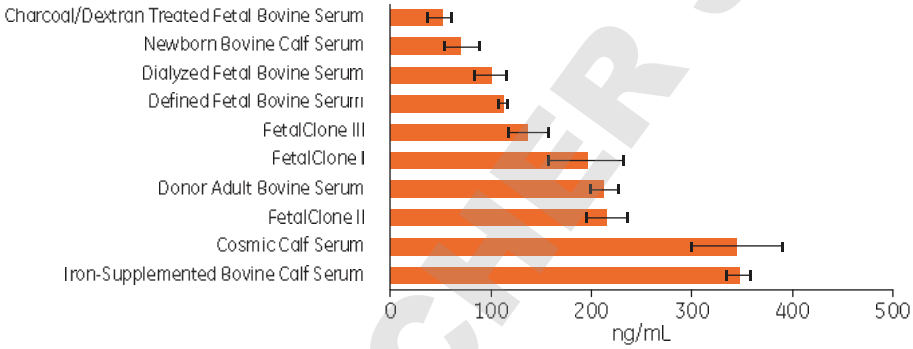


Fig 1. Comparison of average IGF-1 concentration in various HyClone bovine serum products (n = 3). Errors bars show +/- one standard deviation.

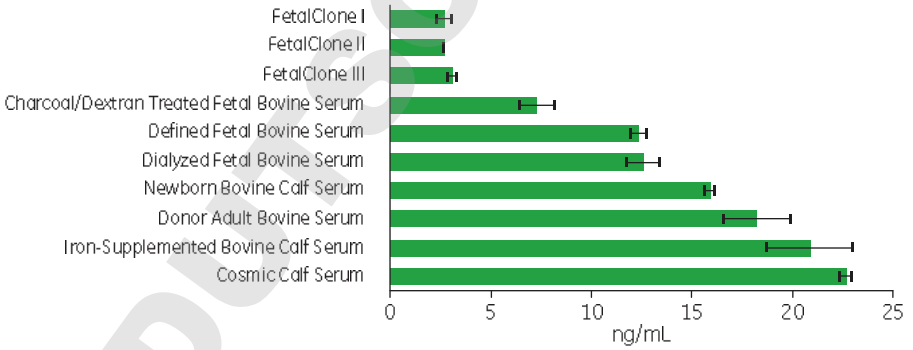


Fig 2. Comparison of average TGF-beta concentration in various HyClone bovine serum products (n = 3). Error bars show +/- one standard deviation.

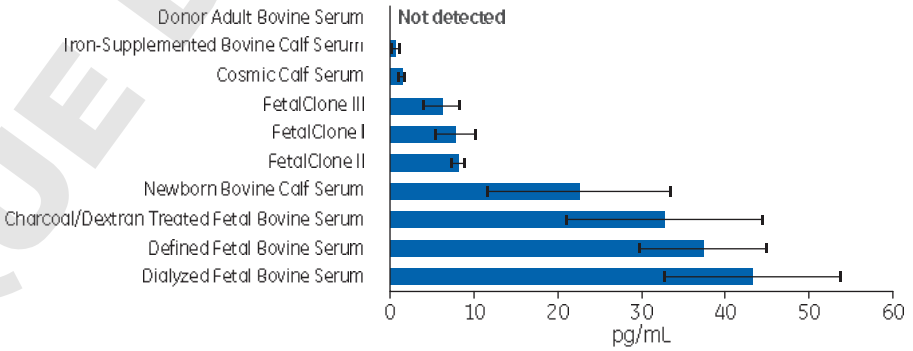


Fig 3. Comparison of average FGF-2 concentration in various HyClone bovine serum products (n = 3). Error bars show +/- one standard deviation.

For methodology, more information, and discussion about possible effects on cell culture, please contact Customer Support at 1-800-492-5663.

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