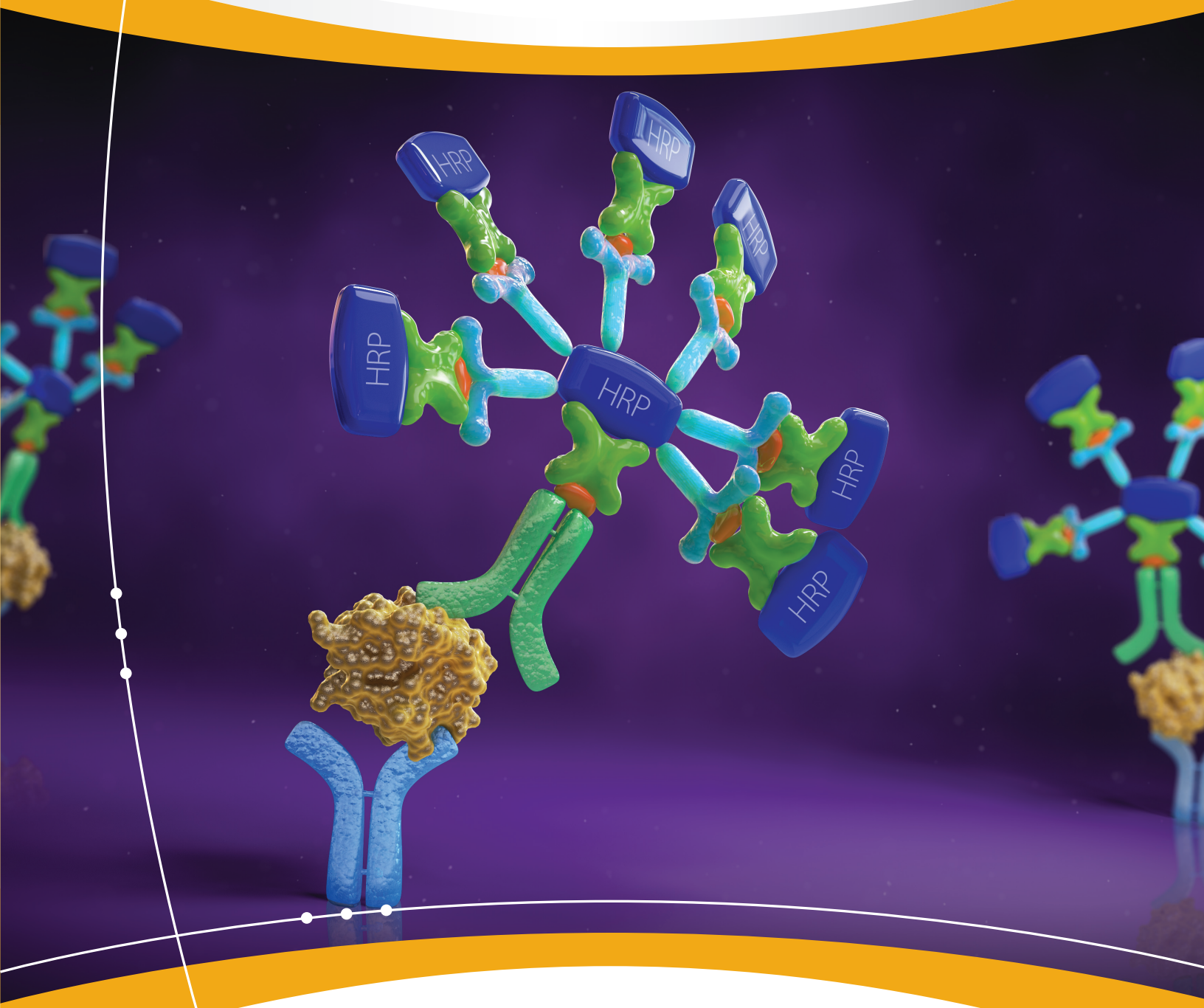
eBioscience®
high performance immunoassays

High Sensitivity ELISA

For Human and Mouse



High Sensitivity ELISA Kits

QUALITY
DESIGN.
PERFORMANCE.

Low Abundance Target Analysis Made Easy

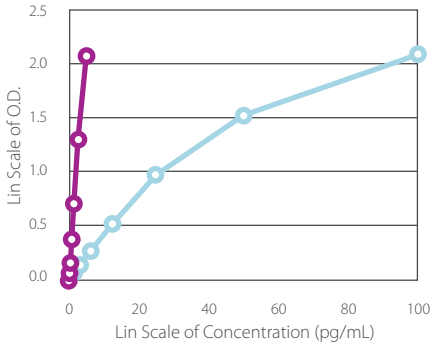
High Sensitivity ELISAs from eBioscience enable the analysis of target analytes in low concentrations from serum, plasma, or cell culture samples. Scientists who are looking for improved sensitivity can now take advantage of our High Sensitivity ELISA Portfolio.

eBioscience High Sensitivity ELISA Kits offer accurate quantification below conventional ELISA limits. This is made possible by the inherent design which amplifies the signal generated by the enzyme horseradish peroxidase (HRP) and the colorimetric-detectable substrate tetramethylbenzidin (TMB), based on Tyramide Signal Amplification (TSA) technology*.

*High Sensitivity ELISAs are based on a patent from PerkinElmer LAS, patent number 5,731,158; 5,583,001; 5,196,306.

Advantages of High Sensitivity ELISAs

- **Sensitive** – Detect low cytokine concentrations ≤ 1.0 pg/mL for reliable quantification.
- **Low Sample Volume** – 50 µL sample volume required. Ideal for limited sample resources.
- **Ease-of-Use** – Straightforward protocol with all required reagents included.
- **Existing Instrumentation** – Uses standard colorimetric plate reader (absorption measurement at 450 nm).
- **Includes reagents** for 96-well microtiter plate.



Standard Curve IL-6

High Sensitivity ELISA

Traditional ELISA

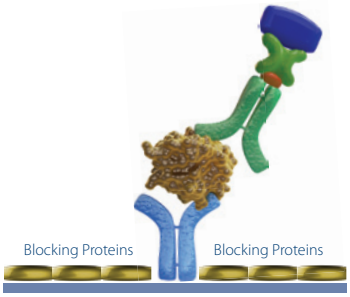
Human				
Analyte	Sensitivity	Standard Range	Cat. No.	Sample Volume
IFN-γ	0.06 pg/mL	0.16 - 10.0 pg/mL	BMS228HS	50 µL
IL-1β	0.05 pg/mL	0.16 - 10.0 pg/mL	BMS224HS	50 µL
IL-2	0.4 pg/mL	0.9 - 60.0 pg/mL	BMS221HS	50 µL
IL-4	0.1 pg/mL	0.25 - 16.0 pg/mL	BMS225HS	50 µL
IL-6	0.03 pg/mL	0.08 - 5.0 pg/mL	BMS213HS	50 µL
IL-10	0.05 pg/mL	0.39 - 25.0 pg/mL	BMS215HS	50 µL
IL-12 (p70)	0.1 pg/mL	0.16 - 10 pg/mL	BMS238HS	50 µL
IL-17A	0.1 pg/mL	0.23 - 15 pg/mL	BMS2017HS	50 µL
TNF-α	0.13 pg/mL	0.31 - 20.0 pg/mL	BMS223HS	50 µL

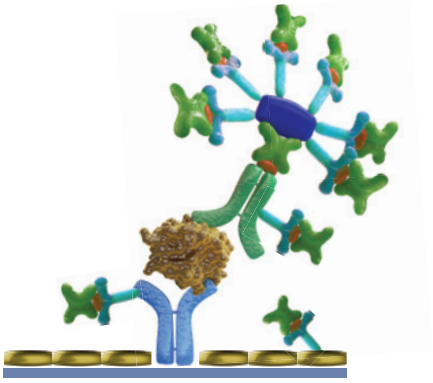
Mouse				
Analyte	Sensitivity	Standard Range	Cat. No.	Sample Volume
IFN-γ	0.05 pg/mL	0.31 - 20 pg/mL	BMS606HS	50 µL
IL-2	0.05 pg/mL	0.78 - 50 pg/mL	BMS601HS	50 µL
IL-4	0.32 pg/mL	0.31 - 20 pg/mL	BMS613HS	50 µL
IL-6	0.21 pg/mL	1.56 - 100 pg/mL	BMS603HS	50 µL

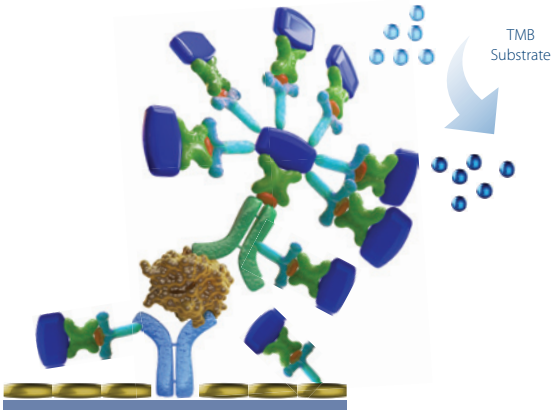
Look Beyond the Borders of Conventional Detection Limits

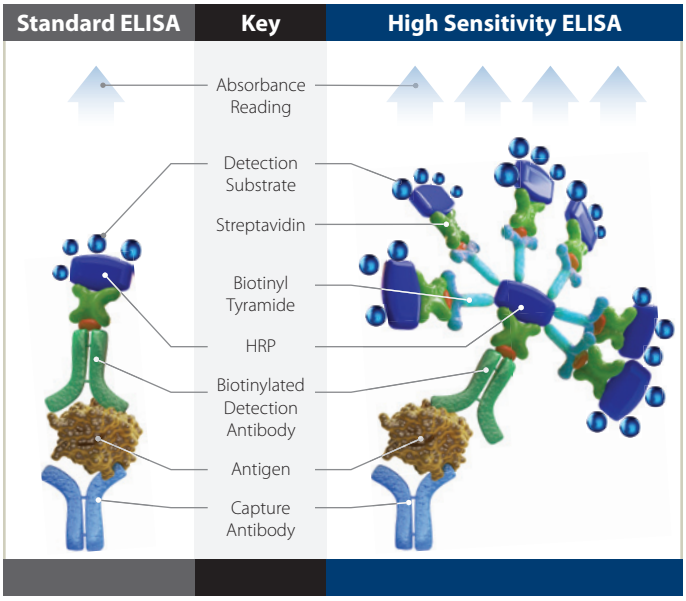
The eBioscience High Sensitivity ELISA provides a solution for difficult to detect, low expressing proteins by further enhancing the signal obtained from conventional colorimetric ELISA. Whereas conventional sandwich ELISA's amplification is accomplished only via the biotin/streptavidin-HRP amplification system, the eBioscience High Sensitivity ELISAs further enhance this signal with the additional signal amplification step using a Tyramide amplification reagent. The biotinylated Tyramide (Amplification Reagent I) undergoes a conversion into a short-lived, extremely reactive intermediate in the presence of HRP. These free radicals bind covalently to any adjacent protein in the vicinity of HRP. This generates multiple biotin binding sites for additional streptavidin-HRP molecules.

- The amount of reacted biotinyl-Tyramide is proportional to the amount of HRP in the well.
- Following incubation, unbound biotinylated Tyramide is removed during a wash step.
- After removal of excess biotin-Tyramide from the wells, streptavidin-HRP (Amplification Reagent II) is added, and binds to the additional biotin sites created during the biotin-Tyramide reaction. This amplification step effectively multiplies the quantity of HRP molecules for the final TMB substrate reaction.









	Standard ELISA		High Sensitivity ELISA	
	Range pg/mL	Sensitivity pg/mL	Range pg/mL	Sensitivity pg/mL
Human TNF-α	8 -500	2.3	0.31 - 20	0.13
Human IFN-γ	1.6 -100	0.99	0.16 - 10	0.06
Human IL-1β	3.9 - 250	0.32	0.16 - 10	0.05
Human IL-2	19 - 1,200	9.9	0.94 - 60	0.40
Human IL-4	8 - 500	1.3	0.25 - 16	0.10
Human IL-6	1.6 - 100	0.9	0.08 - 5	0.03
Human IL-10	3.2 - 200	0.99	0.39 - 25	0.05
Human IL-12p70	3.2 - 200	2.1	0.16 - 10	0.10
Human IL-17A	1.6 - 100	0.5	0.23 - 15	0.10
Mouse IL-2	15.6 - 1,000	5.3	0.78 - 50	0.05
Mouse IL-4	3.9 - 250	1.98	0.31 - 20	0.32
Mouse IL-6	31.3 - 2,000	6.5	1.56 - 100	0.21
Mouse IFN-γ	15.6 - 2,000	5.3	0.31 - 20	0.05

eBioscience®
high performance immunoassays

Headquarters
eBioscience, Inc.
10255 Science Center Drive
San Diego, CA 92121
USA

SERVICE AND SUPPORT FOR DIRECT SALES

North America
Technical Support:
For Research Products:
888.810.6168
858.642.2058
tech@eBioscience.com
For Clinical Products:
877.726.8559
858.642.2058
tech@eBioscience.com
Customer Service:
888.999.1371
858.642.2058
info@eBioscience.com
Fax:
858.642.2046

Austria
Technical Support:
tech@eBioscience.com
Customer Service:
+43 1 796 40 40 305
Austria@eBioscience.com
Fax:
+43 1 796 40 40 400

Belgium
Technical Support:
tech@eBioscience.com
Customer Service:
+43 1 796 40 40 308
Belgium@eBioscience.com
Fax:
+43 1 796 40 40 400

France
Technical Support:
tech@eBioscience.com
Customer Service:
0 800 800 417
France@eBioscience.com
Fax:
0 800 800 418

Germany
Technical Support:
tech@eBioscience.com
Customer Service:
069 33 29 64 56
Germany@eBioscience.com
Fax:
069 255 77 335

Ireland
Technical Support:
tech@eBioscience.com
Customer Service:
+44 208 951 4482
Ireland@eBioscience.com
Fax:
+44 208 952 7527

Netherlands
Technical Support:
tech@eBioscience.com
Customer Service:
+43 1 796 40 40 308
Netherlands@eBioscience.com
Fax:
+43 1 796 40 40 400

Switzerland
Technical Support:
tech@eBioscience.com
Customer Service:
+41 21 510 1214
Switzerland@eBioscience.com
Fax:
+41 21 510 1216

United Kingdom
Technical Support:
tech@eBioscience.com
Customer Service:
+44 208 951 4482
UK@eBioscience.com
Fax:
+44 207 900 1559

Customers in countries where direct sales are not available may contact their eBioscience distributor listed at www.eBioscience.com/distributors

www.eBioscience.com