

# DuoSet<sup>®</sup>

## ELISA Development Systems



# DuoSet ELISA Development System Features

R&D Systems DuoSet ELISA Development Systems contain the essential components required to develop an immunoassay to measure the concentrations of natural or recombinant proteins.



## Economical

Available with sufficient reagents for either five or fifteen 96-well plates, DuoSet ELISA Development Systems are a cost-effective solution for performing multiple ELISAs.

## Optimized

Carefully selected and titrated capture antibodies and detection antibodies, a mass-calibrated standard, and a detailed protocol reduce your preliminary development requirements.

## Flexible

Capture and detection antibody concentrations can be adapted to suit multiple platforms.

## Versatile

Biotinylated detection antibodies and the streptavidin-HRP conjugate enable a choice of chemiluminescent or colorimetric substrates.

## Extensive Analyte Selection

R&D Systems offers over 750 DuoSet ELISA Development Systems with a selection of analytes that support a range of biological processes, including:

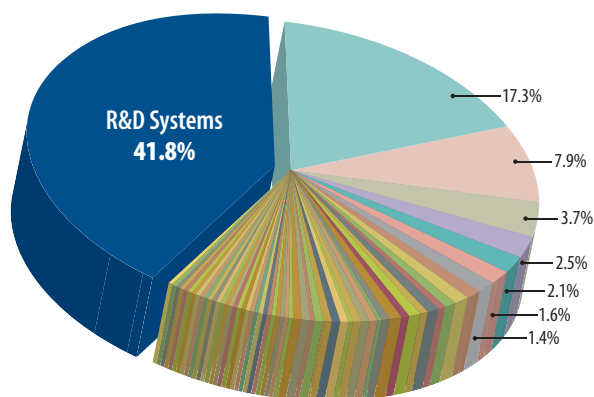
- cytokine and growth factor biology
- inflammation
- cancer biology
- angiogenesis
- apoptosis
- neuroscience
- nephrology
- cardiovascular biology
- obesity/diabetes
- bone metabolism

## Components

- ELISA capture reagent
- biotinylated detection antibody
- streptavidin-HRP
- mass-calibrated standard
- detailed protocol

## Highly Referenced

For 15 years, DuoSet ELISA Development Systems have been referenced in research literature. With over 25,000 product citations, our database makes it easy to view relevant references citing the use of DuoSet ELISA Development Systems. To simplify product selection, citations in our database include information on sample type and a direct link to the article.



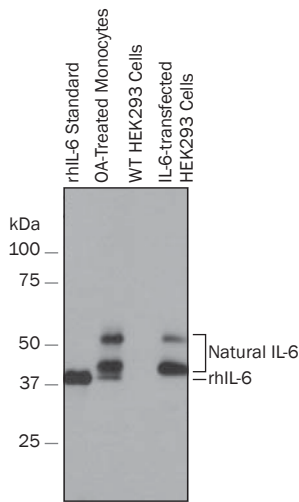
**R&D Systems is the Most Referenced ELISA Manufacturer.** A literature survey was conducted to determine the number of citations referencing the use of R&D Systems ELISA Kits compared to the number referencing ELISAs manufactured by other companies. The survey included 860 manuscripts that were published in one of 44 high impact journals from several different general research areas, including immunology, signal transduction, development, neuroscience, bone, endocrinology, and hematology. A total of 433 ELISA citations referencing immunoassays from 66 different vendors were identified in the survey.

# Delivers Outstanding Quality and Performance

In-house manufacturing and stringent quality-control standards ensure the highest levels of performance and consistency.

## Carefully Selected Antibody Pairs

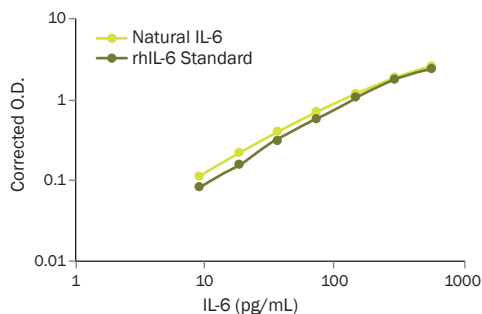
The capture and detection antibodies are carefully selected to ensure their flawless performance as a sandwich ELISA antibody pair. Antibodies are chosen for their specific recognition of target analytes and lack of non-specific analyte detection. Carefully titrated, the antibodies reflect the best concentrations for high top standard Optical Density (O.D.) and low background O.D. signals.



**Specific Detection of Recombinant and Natural Human IL-6.** The detection antibody from the Human IL-6 DuoSet ELISA Development System (Catalog # DY206) was used to detect recombinant human (rh) IL-6 standard (lane 1), in human monocytes treated with Okadaic Acid (OA; lane 2), wild-type (WT) HEK293 cells (lane 3), or IL-6-transfected HEK293 cells (lane 4) by Western blotting. The detection antibody specifically recognized recombinant, natural, and exogenously expressed human IL-6.

## Accurate Detection of Natural Proteins

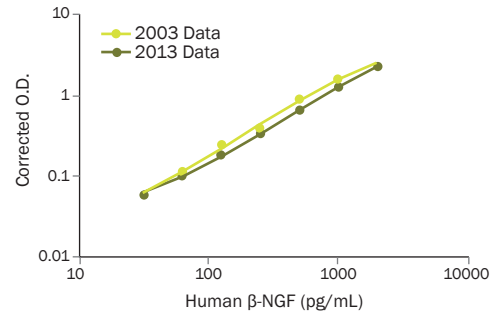
Antibody pairs recognize the supplied recombinant standard and the natural proteins in biological samples in a parallel manner, confirming that this kit can be used to measure the relative mass values of the natural analyte. R&D Systems has determined the ideal standard curve range for each assay, ensuring peak sensitivity and reproducibility of results.



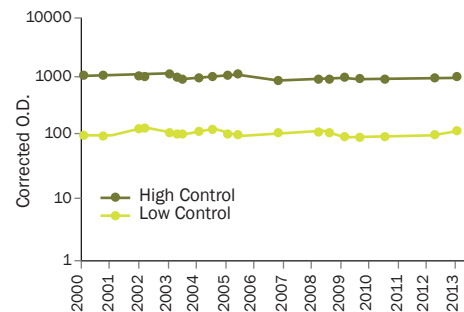
**Recognition of Recombinant and Natural Human IL-6.** Serial dilutions of rhIL-6 standard (dark green line) or natural IL-6 produced by unstimulated monocytes (light green line) were quantitated using the Human IL-6 DuoSet ELISA Development System (Catalog # DY206). DuoSet ELISAs detect both recombinant and natural proteins in a parallel manner across a range of concentrations.

## Confirmed Lot-to-Lot Consistency

All lots are tested to ensure low background, a linear standard curve, consistent assay sensitivity, and a broad dynamic standard curve range. Consistent standard curve O.D.s and control values ensure that sample data is comparable over time.



**Comparison of Human  $\beta$ -NGF Standard Curve O.D.s from 2003 and 2013.** Using the Human  $\beta$ -NGF DuoSet ELISA Development System (Catalog # DY256), standard curve values generated in 2003 and 2013 were compared for lot-to-lot consistency. Standard curve O.D.s remained consistent over ten years.



**Quantitation of Human  $\beta$ -NGF in High and Low Controls.** Controls are assayed with every manufactured lot of  $\beta$ -NGF DuoSet ELISA. Controls must read within a set range of  $\pm$  two standard deviations from the mean. Controls for the  $\beta$ -NGF DuoSet ELISA Development System have remained consistent across 13 years.

## High Specificity

Assays are tested for cross-reactivity and interference with a panel of analyte-related molecules, ensuring their specific and accurate detection of the target analyte.

# R&D Systems Full Line of ELISA Development Systems

R&D Systems offers a variety of ELISA Development Systems that contain the essential components required to develop an immunoassay to measure the concentrations of secreted, intracellular, and phosphorylated proteins.

## DuoSet ELISA Development Systems

A format for sandwich ELISA development

## DuoSet IC (Intracellular) ELISA Development Systems

A format for measuring intracellular molecules in cell lysates by sandwich ELISA

## DuoSet IC (Intracellular) Phospho-specific ELISA Development Systems

A format for measuring phosphorylated intracellular molecules in cell lysates by sandwich ELISA

## DuoSet Ancillary Kits

The perfect complement to the 5-plate DuoSet ELISA Development System, DuoSet Ancillary Kits provide a comprehensive collection of reagents and plates to perform five 96-well assays.

### Choose from three Ancillary Kits:

Product	Datasheet-recommended Diluent*	Catalog #
DuoSet Ancillary Kit 1	Reagent Diluent 1	DY007
DuoSet Ancillary Kit 2	Reagent Diluent 2	DY008
DuoSet Ancillary Kit 3	Reagent Diluent 3	DY009

\* To identify the appropriate Reagent Diluent, please consult the online product datasheet for your DuoSet ELISA Development System of interest. Each analyte presents varying requirements. Numbering of the Ancillary Kits reflect Reagent Diluent provided. Datasheets available on [RnDSystems.com](http://RnDSystems.com).



### Ancillary Kit Components

- 96-well plates
- ELISA coating buffer
- plate sealers
- reagent diluent
- substrate reagents
- wash buffer
- stop solution

## Supplemental ELISA Products

For maximum flexibility, stand-alone ELISA development products are available in larger pack sizes.

Product	Size	Catalog #
Clear 96-well Microplates (12 strips of 8 wells)	25 plates	DY990
Black 96-well Microplates (12 strips of 8 wells)	25 plates	DY991
ELISA Plate Sealers	100 sealers	DY992
ELISA Plate-Coating Buffer	250 mL	DY006
Glo Substrate Reagent Pack	60 mL	DY993
Stop Solution	90 mL	DY994
Reagent Diluent Concentrate 3 (5X)	1,050 mL (1X)	DY004

Product	Size	Catalog #
Reagent Diluent Concentrate 2 (10X)	1,050 mL (1X)	DY995
Reagent Diluent Concentrate 1	1,500 mL (1X)	DY997
Reagent Additive 1	21 mL	DY005
Streptavidin-HRP	75 plates	DY998
Substrate Reagent Pack	20 plates	DY999
Wash Buffer Concentrate	12.5 L (1X)	WA126



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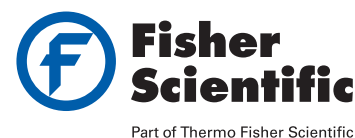
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