

# Human Cathepsin B (total)



[www.mesoscale.com](http://www.mesoscale.com)

## Ordering Information

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## Scientific Support

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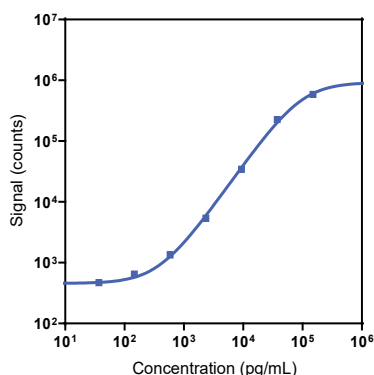
## Company Address

Meso Scale Discovery  
A division of  
Meso Scale Diagnostics, LLC.  
1601 Research Boulevard  
Rockville, MD 20850-3173 USA

| Product Options | Catalog Number                                                                        | Description                                                         |
|-----------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| Singleplex      | K151ACAR-2                                                                            | R-PLEX Human Cathepsin B (total) Assay with SECTOR™ plates          |
|                 | K151ACAR-22                                                                           | R-PLEX Human Cathepsin B (total) Assay with QuickPlex Ultra™ plates |
| Antibody Set    | F21ACA-3                                                                              | R-PLEX Human Cathepsin B (total) Antibody Set                       |
| Protocol        | Assay Protocol 1 in the <a href="#">R-PLEX Antibody Sets Singleplex Assays Insert</a> |                                                                     |

MESO SCALE DISCOVERY® R-PLEX Antibody Sets and Assays provide an expanded menu of electrochemiluminescence reagents for biomarker discovery and development. The Antibody Sets include a matched, biotinylated capture and SULFO-TAG™ conjugated detection antibody pair and Calibrator for the quick and easy development of highly sensitive immunoassays. R-PLEX® Assays add diluents, MSD GOLD™ Read Buffer B, and the appropriate plates, providing a complete set of components to develop and run an assay. R-PLEX Assays with QuickPlex Ultra plates can only be read on the MESO® QuickPlex Q 60MM instrument. R-PLEX Assays with SECTOR plates can be read on all MESO SECTOR® instruments and the MESO QuickPlex® SQ 120/120MM instrument.

## Representative Calibration Curve and Sensitivity



|                                                                         |                 |
|-------------------------------------------------------------------------|-----------------|
| Calibrator Stock (20X)                                                  | 3,000,000 pg/mL |
| Calibrator Standard 1 (top of curve); 20-fold Calibrator stock dilution | 150,000 pg/mL   |
| LLOD                                                                    | 320 pg/mL       |

Representative data using the primary diluent pair in singleplex are presented above. The calibration curve was fitted with a 4-parameter logistic (or sigmoidal dose-response) model with a  $1/Y^2$  weighting. The lower limit of detection (LLOD) is a calculated concentration corresponding to the signal 2.5 standard deviations above the background (zero Calibrator).

Refer to the R-PLEX Singleplex Product Insert when developing a singleplex assay. Use the R-PLEX Multiplex Product Insert when developing a multiplex R-PLEX assay. For multiplexing a combination of R-PLEX and U-PLEX® Antibody Sets, refer to the U-PLEX Development Pack product insert. The detailed instruction manuals as well as the R-PLEX assay datasheets are available at <https://www.mesoscale.com>.

## Sample Dilution

The R-PLEX Human Cathepsin B (total) Antibody Set has been tested with the following sample type(s) at the specified dilution in assay diluent.

| Sample Type | Recommended Fold Dilution |
|-------------|---------------------------|
| Serum       | 4                         |
| Plasma      | 4                         |

For Research Use Only.  
Not for use in diagnostic  
procedures.

The fold dilution specified is a suggested dilution. We recommend that sample dilution and other assay parameters be optimized before running samples.

# MSD® R-PLEX Assays

## Source

|                         |                                                                           |
|-------------------------|---------------------------------------------------------------------------|
| <b>Calibrator</b>       | Recombinant Human Cathepsin B (total) expressed in a mouse cell line      |
| <b>Antibodies</b>       | Capture antibody - mouse monoclonal, detection antibody - goat polyclonal |
| <b>Assay Generation</b> | A                                                                         |

## Recommended Assay Components

The following items are recommended for developing assays using R-PLEX Antibody Sets.

## Plates for Singleplex Assay Development

Plates are available in packs of 1, 5, 30, 120, and 510.

| Description                                            | Catalog No. | Included in: |
|--------------------------------------------------------|-------------|--------------|
| MSD GOLD 96-well Small Spot Streptavidin SECTOR Plates | L45SA       | K151ACAR-2   |
| 96-well Small Spot Streptavidin QuickPlex Ultra Plates | L4BLA       | K151ACAR-22  |

## Buffers

| Description                        | Catalog No. | Included in: |
|------------------------------------|-------------|--------------|
| Diluent 100 (50 mL)                | R50AA-4     | K151ACAR     |
| MSD GOLD Read Buffer B (90 mL)     | R60AM-2     | K151ACAR     |
| MSD Wash Buffer (20X, 100 mL)      | R61AA-1     | -            |
| MSD Tris Wash Buffer (10X, 200 mL) | R61TX-2     | -            |

## Diluent Compatibility

The R-PLEX Human Cathepsin B (total) Antibody Set has been tested with the following diluent pair(s). The primary diluent pair was used for generating the data shown above and is included in the R-PLEX Human Cathepsin B (total) Assay. Alternate diluent pairs may be considered for use with R-PLEX Antibody Sets, based on the sample type.

| Tested Diluent Pair | Assay Diluent |             | Antibody Diluent |             |
|---------------------|---------------|-------------|------------------|-------------|
|                     | Description   | Catalog No. | Description      | Catalog No. |
| Primary             | Diluent 12    | R50JA       | Diluent 11       | R55BA       |
| Alternate 1         | Diluent 57    | R50BZ       | Diluent 3        | R50AP       |

Diluents sufficient to run 40 samples per plate in duplicate with up to a 10-fold sample dilution are provided with R-PLEX assays.

Additional assay diluent may be necessary for samples that are diluted greater than 10-fold and can be ordered separately. Diluent 100 may be used in place of assay diluent for samples that require high dilution. Testing of different diluents can help optimize assays for specific experimental conditions and sample types.

MSD offers a range of assay and antibody diluents for separate purchase. Please view our website at [www.mesoscale.com/R-PLEX](http://www.mesoscale.com/R-PLEX) for more details on compatible diluents for R-PLEX assays.

