



EAGLE
BIOSCIENCES

Human MICA ELISA Assay Kit

Catalog Number:

MCA31-K01 (1 x 96 wells)

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

v. 1.0 (16 AUG 24)

Eagle Biosciences, Inc.
20A Northwest Blvd., Suite 112, Nashua, NH 03063
Phone: 617-419-2019 Fax: 617-419-1110
www.EagleBio.com



INTENDED USE

The Eagle Biosciences Human MICA ELISA Assay Kit is intended for the quantitative measurement of MICA in human serum/plasma, urine, and more. The MICA ELISA Assay Kit is for research use only and not to be used in diagnostic procedures.

REAGENTS PROVIDED

Content	Volume
CP (Coated Plate)	96 well
S (Standard)	9 vial
AB (Assay Buffer 1x)	12 mL/bottle
SD (Sample Diluent)	12 mL/bottle
DA-H (Detect Antibody-HRP)	6 mL/bottle
TS (TMB Substrate)	12 mL/bottle
SS (Stop Solution)	12 mL/bottle
WB (Wash Buffer 10x)	50 mL/bottle
SF (Sealer Film)	6 pieces

Note: After the kit is opened, the stabilization period of each content is 30 days, so please use the kit within 30 days after opening.

REAGENT PREPARATION

Washing Buffer (1x) Preparation:

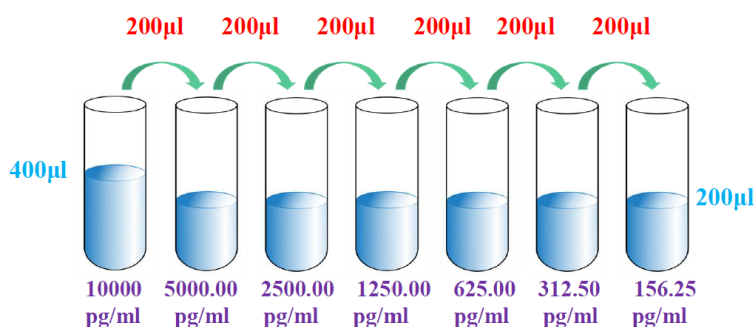
Pour entire contents (50 mL) of the **Washing Buffer Concentrate** (10x) into a clean 500 mL graduated cylinder. Bring to final volume of 500 mL with glass-distilled or deionized water. Transfer to a clean wash bottle and store at 2 to 25°C.

Standard Curve Preparation:

S1 to S7 and S0 is ready to use for serum and plasma.

Other sample type, prepare the standard curve with whatever buffer (SPB, Sample Prepared Buffer) is used to prepare the sample, such as cell culture supernatant, tissue grinding liquid, cell lysate, etc. For urine samples us AB (Assay Buffer) to prepare the standard curve.

The Human MICA Standard 100,000 pg/mL 40 μ L + 360 μ L SPB serves as the high standard (10,000 pg/mL). Pipette 200 μ L of SPB into each tube. Use the high standard to produce a 1:1 dilution series. Mix each tube thoroughly before the next transfer. SPB serves as the zero standard (0 pg/mL).



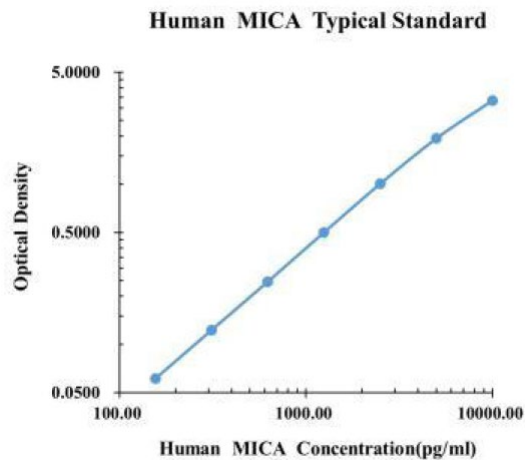


ASSAY PROCEDURE

Bring all reagents and samples to room temperature before use.

1. Prepare all reagents and working standards as directed in the previous sections.
2. Remove excess CP (Coated Plate) strips from the plate frame, return them to the foil pouch and reseal.
3. Add 50 μ L of AB (Assay Buffer) to each well.
4. Add 50 μ L of Standard or Sample per well. Ensure reagent addition is uninterrupted and completed within 15 minutes.
5. Add 50 μ L of DA-H (Detect Antibody-HRP) to each well.
6. Cover with an SF (Sealer Film). Incubate at room temperature (18 to 25°C) for 1 hour on a microplate shaker set to 500 rpm.
7. Aspirate each well and wash, repeating the process four times. Wash by filling each well with WB (Washing Buffer 300 μ L). Complete removal of liquid at each step is essential to good performance. After the last wash, remove any remaining WB (Washing Buffer) by aspirating or decanting. Invert the plate and blot it against clean paper towels.
8. Add 100 μ L of TS (TMB Substrate) to each well. Incubate for 5-30 minutes at room temperature.
9. Add 100 μ L of SS (Stop Solution) to each well.
10. Determine the optical density within 30 minutes, using a microplate reader set to 450 nm corrected with 570 nm or 630 nm.

TYPICAL DATA



pg/mL	O.D.	Average	Corrected
0.00	0.0202	0.0214	0.0208
156.25	0.0808	0.0828	0.0818
312.50	0.1430	0.1440	0.1435
625.00	0.2682	0.2661	0.2672
1250.00	0.5125	0.5294	0.5210
2500.00	1.0160	1.0370	1.0265
5000.00	1.9670	1.9410	1.9540
10000.00	3.2950	3.4180	3.3565



SENSITIVITY

The minimum detectable dose (MDD) of human MICA is typically less than 8.30 pg/mL.

The MDD was determined by adding two standard deviations to the mean optical density value of ten zero standard replicates and calculating the corresponding concentration.

PRECISION

Intra-assay Precision (Precision within an assay)

Three samples of known concentration were tested twenty times on one plate to assess intra-assay precision.

Inter-assay Precision (Precision between assays)

Sample Number	Intra-assay Precision			Inter-assay Precision		
	S1	S2	S3	S1	S2	S3
	22	22	22	6	6	6
Average (pg/mL)	389.9	1231.6	3586.9	373.1	85.4	3682.9
Standard Deviation	21.2	45.6	111.9	4.6	41.5	85.4
Coefficient of variation (%)	5.4	3.7	3.1	2.5	3.1	2.3

RECOVERY

The spike recovery was evaluated by spiking 3 levels of human MICA into healthy human serum samples. The un-spiked serum was used as a blank in this experiment. The recovery ranged from 94% to 112% with an overall mean recovery of 106%.

LINEARITY

To assess the linearity of the assay, five samples were spiked with high concentration of MICA in human serum and diluted with Sample Diluent to produce samples with values within the dynamic range of the assay. The linearity ranged from 97% to 109% with an overall mean recovery of 103%.

SAMPLE VALUES

Serum/Plasma - Thirty samples from apparently healthy volunteers were evaluated for the presence of MICA in this assay. No medical histories were available for the donors.

Sample Matrix	Sample Evaluated	Range (pg/mL)	Detectable %	Mean of Detectable (pg/mL)
Serum	30	469.25 - 3717.25	100%	1351.05

n.d. = non-detectable. Samples measured below the sensitivity are considered to be non-detectable.



Warranty Information

Eagle Biosciences, Inc. warrants its Product(s) to operate or perform substantially in conformance with its specifications, as set forth in the accompanying package insert. This warranty is expressly limited to the refund of the price of any defective Product or the replacement of any defective Product with new Product. This warranty applies only when the Buyer gives written notice to the Eagle Biosciences within the expiration period of the Product(s) by the Buyer. In addition, Eagle Biosciences has no obligation to replace Product(s) as result of a) Buyer negligence, fault, or misuse, b) improper use, c) improper storage and handling, d) intentional damage, or e) event of force majeure, acts of God, or accident.

Eagle Biosciences makes no warranties, either expressed or implied, except as provided herein, including without limitation thereof, warranties as to marketability, merchantability, fitness for a particular purpose or use, or non-infringement of any intellectual property rights. In no event shall the company be liable for any indirect, incidental, or consequential damages of any nature, or losses or expenses resulting from any defective product or the use of any product. Product(s) may not be resold, modified, or altered for resale without prior written approval from Eagle Biosciences, Inc.

For further information about this kit, its application or the procedures in this kit insert, please contact the Technical Service Team at Eagle Biosciences, Inc. at info@eaglebio.com or at 866-411-8023.