abcam

Product datasheet

# Human JAM-A ELISA Kit (Junctional Adhesion Molecule) ab277079

Recombinant SimpleStep ELISA

5 Images

## Overview

**Product name** Human JAM-A ELISA Kit (Junctional Adhesion Molecule)

**Detection method** Colorimetric

**Precision**

Intra-assay

| Sample | n | Mean | SD | CV% |
|---|---|---|---|---|
| Serum | 8 | | | 2.5% |

Inter-assay

| Sample | n | Mean | SD | CV% |
|---|---|---|---|---|
| Serum | 3 | | | 6.4% |

**Sample type** Cell culture supernatant, Serum, Hep Plasma, EDTA Plasma, Cit plasma

**Assay type** Sandwich (quantitative)

**Sensitivity** 1.9 pg/ml

**Range** 15.625 pg/ml - 1000 pg/ml

**Recovery**

Sample specific recovery

| Sample type | Average % | Range |
|---|---|---|
| Cell culture supernatant | 94 | 86% - 103% |
| Serum | 102 | 86% - 107% |
| Hep Plasma | 91 | 88% - 96% |
| EDTA Plasma | 85 | 82% - 90% |
| Cit plasma | 96 | 81% - 113% |

| | |
|---|---|
| **Assay time** | 1h 30m |
| **Assay duration** | One step assay |
| **Species reactivity** | **Reacts with:** Human |
| **Product overview** | Human JAM-A ELISA kit (ab277079) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of Human JAM-A protein in human serum, plasma, and cell culture media. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human JAM-A with 1.9 pg/mL sensitivity.<br><br>SimpleStep ELISA® technology employs capture antibodies conjugated to an affinity tag that is recognized by the monoclonal antibody used to coat our SimpleStep ELISA® plates. This approach to sandwich ELISA allows the formation of the antibody-analyte sandwich complex in a single step, significantly reducing assay time. See the SimpleStep ELISA® protocol summary in the image section for further details. Our SimpleStep ELISA® technology provides several benefits:<br><br>-Single-wash protocol reduces assay time to 90 minutes or less<br>-High sensitivity, specificity and reproducibility from superior antibodies<br>-Fully validated in biological samples<br>-96-wells plate breakable into 12 x 8 wells strips<br><br>A 384-well SimpleStep ELISA® microplate (**ab203359**) is available to use as an alternative to the 96-well microplate provided with SimpleStep ELISA® kits. |
| **Notes** | Junctional Adhesion Molecule (JAM-A), a type I transmembrane protein, appears to play a role in epithelial tight junction formation. JAM-A emerges early in primordial forms of cell junctions and recruits PARD3. The association of the PARD6-PARD3 complex may prevent the interaction of PARD3 with JAM-A, thereby preventing tight junction assembly. JAM-A plays a role in regulating monocyte transmigration involved in integrity of epithelial barrier. JAM-A shares 68.4%, 71.8%, 74.6%, and 97.0% sequence homology with mouse, rat, bovine, and monkey, respectively. |
| **Platform** | Pre-coated microplate (12 x 8 well strips) |

## Properties

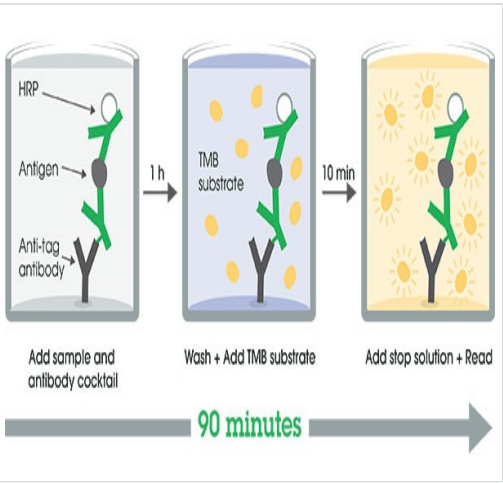
| | |
|---|---|
| **Storage instructions** | Store at +4°C. Please refer to protocols. |

| Components | 1 x 96 tests |
|---|---|
| 10X Human JAM-A (Junctional Adhesion Molecule) Capture Antibody | 1 x 600µl |
| 10X Human JAM-A (Junctional Adhesion Molecule) Detector Antibody | 1 x 600µl |
| 10X Wash Buffer PT (ab206977) | 1 x 20ml |
| Antibody Diluent 4BI | 1 x 6ml |
| Human JAM-A (Junctional Adhesion Molecule) Lyophilized Recombinant Protein | 2 vials |
| Plate Seals | 1 unit |

| Components | 1 x 96 tests |
|---|---|
| Sample Diluent NS (ab193972) | 1 x 12ml |
| SimpleStep Pre-Coated 96-Well Microplate (ab206978) | 1 unit |
| Stop Solution | 1 x 12ml |
| TMB Development Solution | 1 x 12ml |

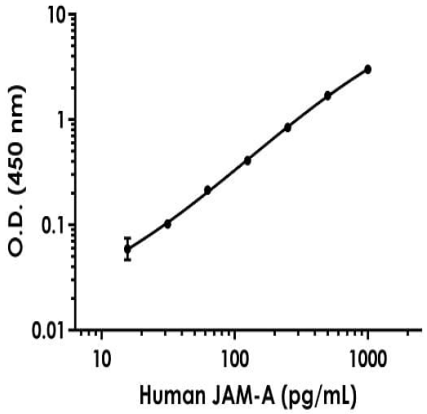
| | |
|---|---|
| **Function** | Seems to plays a role in epithelial tight junction formation. Appears early in primordial forms of cell junctions and recruits PARD3. The association of the PARD6-PARD3 complex may prevent the interaction of PARD3 with JAM1, thereby preventing tight junction assembly (By similarity). Plays a role in regulating monocyte transmigration involved in integrity of epithelial barrier. Involved in platelet activation. In case of orthoreovirus infection, serves as receptor for the virus. |
| **Sequence similarities** | Belongs to the immunoglobulin superfamily.<br>Contains 2 Ig-like V-type (immunoglobulin-like) domains. |
| **Post-translational modifications** | N-glycosylated. |
| **Cellular localization** | Cell junction > tight junction. Cell membrane. Localized at tight junctions of both epithelial and endothelial cells. |

## Images



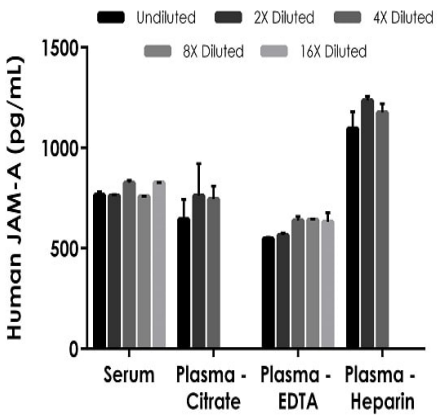

SimpleStep ELISA Protocol Diagram

SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.



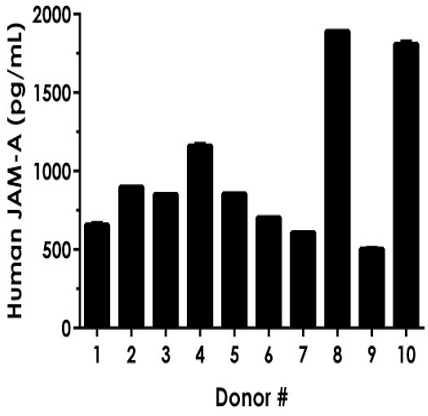

Example of human JAM-A standard curve in Sample Diluent NS

The JAM-A standard curve was prepared as described in Section 10. Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.



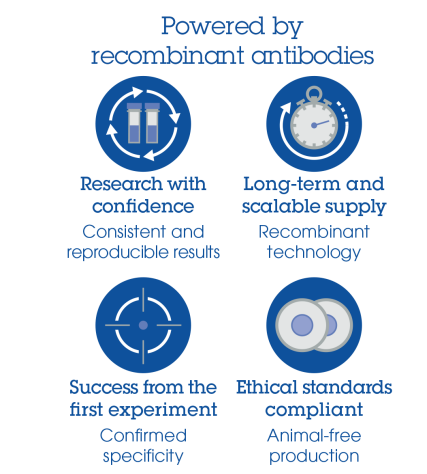

Interpolated concentrations of native JAM-A in human serum and plasma samples.

The concentrations of JAM-A were measured in duplicates, interpolated from the JAM-A standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 100%, plasma (citrate) 25%, plasma (EDTA) 100%, and plasma (heparin) 100% The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean JAM-A concentration was determined to be 787.60 pg/mL in serum, 716.49 pg/mL in plasma (citrate), 605.26 pg/mL in plasma (EDTA), and 1072.39 pg/mL in plasma (Heparin).




50% Serum from ten individual healthy human female donors was measured in duplicate.

Interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean JAM-A concentration was determined to be 994.21 pg/mL with a range of 504.21 – 1890.29 pg/mL.




Sandwich ELISA - Human JAM-A ELISA Kit (Junctional Adhesion Molecule)

To learn more about the advantages of recombinant antibodies see **here**.

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