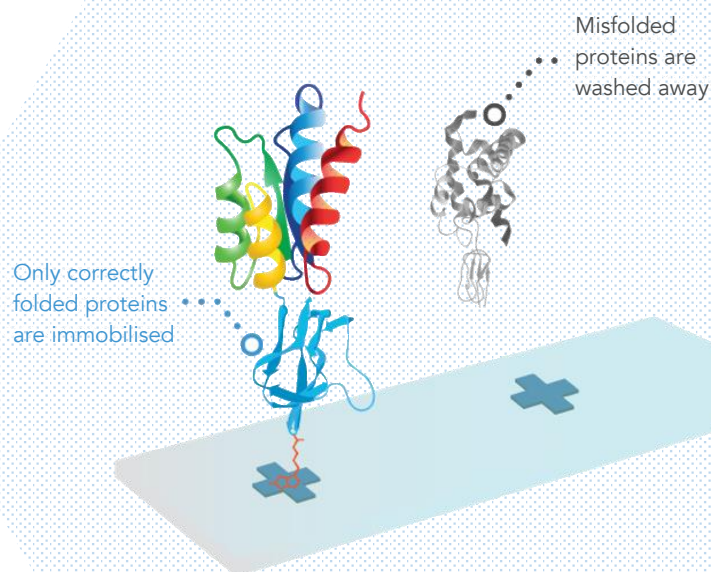


# Immunome™ AxCESS Arrays

## SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH), Annex II



# KREX

World's only technology  
that consistently produces full-length, correctly folded, functional proteins

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

|     |  |  |
|-----|--|--|
| 1.1 | <b>Product identifier</b>  |  |
|     | Trade name<br>Reference no.  | Sengenics KREX Immunome AxCESS Arrays<br>40010   |
| 1.2 | <b>Relevant identified uses of the substance or mixture and uses advised against</b> |  |
|     | Identified use(s)  | Analytical reagent. For research use only  |
| 1.3 | <b>Details of the supplier of the safety data sheet</b>                              |  |
|     | Company identification   | Sengenics Corporation Pte Ltd<br>Floor M, Tower A, Plaza Zurich<br>Jalan Gelenggang<br>50490 Bukit Damansara<br>Kuala Lumpur<br>MALAYSIA |
|     | Telephone  | +603-27001364  |
|     | E-mail   | enquiries@sengenics.com  |
| 1.4 | <b>Emergency telephone number</b>  |  |
|     | Emergency Phone No.  |  |

## SECTION 2: HAZARDS IDENTIFICATION

|     |   |  |
|-----|---|--|
| 2.1 | <b>Classification of the substance or mixture<br/>Regulation (EC) No. 1272/2008 (CLP)</b> | Not classified as hazardous                |
|     | <b>Directive 67/548/EEC &amp; Directive<br/>1999/45/EC</b>                                | Not classified as dangerous for supply/use |
|     | <b>OSHA Hazard Communication Standard<br/>29 CFR 1910.1200 (HazCom 2012)/GHS</b>          | Not classified as hazardous                |
| 2.2 | <b>Label elements</b>   | No measures required                       |
| 2.3 | <b>Other hazards</b>  | None anticipated                           |

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

| 3.1                     | <b>Mixtures</b>               | <p>Description:<br/>Microarray slide containing immobilised recombinant proteins immersed in a glycerol water mixture solution</p> <p>Dangerous components:<br/>EC Classification No. 1272/2008 / GHS</p> <table border="1" data-bbox="461 568 1447 732"> <thead> <tr> <th>Hazardous ingredient(s)</th> <th>%W/W</th> <th>EC No.</th> <th>CAS No.</th> <th>Classification code:<br/>Hazard statement(s)</th> </tr> </thead> <tbody> <tr> <td>Glycerol</td> <td>60</td> <td>200-289-5</td> <td>56-81-5</td> <td>-</td> </tr> </tbody> </table> <p>EC Classification No. 67/548/EEC</p> <table border="1" data-bbox="461 819 1447 983"> <thead> <tr> <th>Hazardous ingredient(s)</th> <th>%W/W</th> <th>EC No.</th> <th>CAS No.</th> <th>EC Classification and Risk Phrases</th> </tr> </thead> <tbody> <tr> <td>Glycerol</td> <td>60</td> <td>200-289-5</td> <td>56-81-5</td> <td>-</td> </tr> </tbody> </table> | Hazardous ingredient(s) | %W/W  | EC No. | CAS No. | Classification code:<br>Hazard statement(s) | Glycerol | 60 | 200-289-5 | 56-81-5 | - | Hazardous ingredient(s) | %W/W | EC No. | CAS No. | EC Classification and Risk Phrases | Glycerol | 60 | 200-289-5 | 56-81-5 | - |
|-------------------------|-------------------------------|---|-------------------------|---|--------|---------|---|----------|----|-----------|---------|---|-------------------------|------|--------|---------|------------------------------------|----------|----|-----------|---------|---|
| Hazardous ingredient(s) | %W/W                          | EC No.  | CAS No.                 | Classification code:<br>Hazard statement(s) |        |         |   |          |    |           |         |   |                         |      |        |         |                                    |          |    |           |         |   |
| Glycerol                | 60                            | 200-289-5   | 56-81-5                 | -   |        |         |   |          |    |           |         |   |                         |      |        |         |                                    |          |    |           |         |   |
| Hazardous ingredient(s) | %W/W                          | EC No.  | CAS No.                 | EC Classification and Risk Phrases          |        |         |   |          |    |           |         |   |                         |      |        |         |                                    |          |    |           |         |   |
| Glycerol                | 60                            | 200-289-5   | 56-81-5                 | -   |        |         |   |          |    |           |         |   |                         |      |        |         |                                    |          |    |           |         |   |
| 3.2                     | <b>Additional information</b> | <p>See Section 8: Occupational Exposure Limits</p> <p>The constructs used in production do not have the necessary elements required for mammalian cell expression, nor do they have any recognised method of being transferred to and expressed within a mammalian cell from its current host.</p> <p>Expressed proteins are too large to be absorbed through the gut wall intact and are too large to passively diffuse through cell membranes.</p> <p>The organisms used in production are not associated with any environmentally damaging effects. The overall risk of causing harm to the environment is effectively zero.</p> <p>The risk to human health and environmental safety with respect to the above materials is extremely small.</p>  |                         |   |        |         |   |          |    |           |         |   |                         |      |        |         |                                    |          |    |           |         |   |

## SECTION 4: FIRST AID MEASURES



|     |   |  |
|-----|---|--|
| 4.1 | <b>Description of first aid measures</b>  |  |
|     | Inhalation  | Supply fresh air; consult doctor in case of complaint                                      |
|     | Skin Contact  | Wash skin with soap and water. Remove contaminated clothing and wash clothing before reuse |
|     | Eye Contact   | Rinse cautiously with water for several minutes. Consult a doctor in case of complaint     |
|     | Ingestion   | Wash out mouth with water. Consult a doctor in case of complaint                           |
| 4.2 | <b>Most important symptoms and effects, both acute and delayed</b>                | None anticipated   |
| 4.3 | <b>Indication of the immediate medical attention and special treatment needed</b> | None known   |

## SECTION 5: FIRE-FIGHTING MEASURES

|     |  |   |
|-----|--|---|
| 5.1 | <b>Extinguishing media</b>                                   |   |
|     | Suitable extinguishing media                                 | CO <sub>2</sub> , powder or water spray. Fight larger fires with water spray or alcohol resistant foam  |
| 5.2 | <b>Special hazards arising from the substance or mixture</b> | In case of fire, the following can be released: Carbon oxides (CO <sub>x</sub> ), nitrogen oxides (NO <sub>x</sub> ), sulphur oxides (SO <sub>x</sub> )             |
| 5.3 | <b>Advice for fire-fighters</b>                              | Use fire-extinguishing methods suitable to surrounding conditions. Wear full protective suit and self-contained breathing apparatus (SCBA) when extinguishing fires |

## SECTION 6: ACCIDENTAL RELEASE MEASURES

|     |  |  |
|-----|--|--|
| 6.1 | <b>Personal precautions, protective equipment and emergency procedures</b> | Refer to Section 8 for protective measures when handling the spillage  |
| 6.2 | <b>Environmental precautions</b>   | No special requirements  |
| 6.3 | <b>Methods and material for containment and cleaning up</b>                | Absorb with liquid-binding material (paper towelling, sand, diatomite, acid binders, universal binders, sawdust). Dispose of contaminated material as waste according to Section 13. Rinse off area with water |
| 6.4 | <b>Reference to other sections</b>   | 8, 13  |

## SECTION 7: HANDLING AND STORAGE

|     |  |  |
|-----|--|--|
| 7.1 | Precautions for safe handling                                | <ul style="list-style-type: none"> <li>▪ Avoid contact with the eyes, skin and mucous membranes</li> <li>▪ Keep out of reach of children</li> <li>▪ Wash hands before breaks and after work</li> </ul> |
| 7.2 | Conditions for safe storage, including any incompatibilities | Store in the original container at -20°C   |
| 7.3 | Specific end use(s)  | Use as per instructions for use. For professional use only   |

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

| 8.1             | Control parameters           |   |                                    |         |        |                                    |                 |         |                   |    |
|-----------------|------------------------------|---|------------------------------------|---------|--------|------------------------------------|-----------------|---------|-------------------|----|
| 8.1.1           | Occupational Exposure Limits |   |                                    |         |        |                                    |                 |         |                   |    |
|                 |                              | <table border="1"> <thead> <tr> <th>SUBSTANCE.</th> <th>CAS No.</th> <th>Source</th> <th>LTEL (8 hr TWA mg/m<sup>3</sup>)</th> </tr> </thead> <tbody> <tr> <td>Glycerol (mist)</td> <td>56-81-5</td> <td>UK WEL / Irl OELV</td> <td>10</td> </tr> </tbody> </table> | SUBSTANCE.                         | CAS No. | Source | LTEL (8 hr TWA mg/m <sup>3</sup> ) | Glycerol (mist) | 56-81-5 | UK WEL / Irl OELV | 10 |
| SUBSTANCE.      | CAS No.                      | Source  | LTEL (8 hr TWA mg/m <sup>3</sup> ) |         |        |                                    |                 |         |                   |    |
| Glycerol (mist) | 56-81-5                      | UK WEL / Irl OELV   | 10                                 |         |        |                                    |                 |         |                   |    |

|       |                                    |  |
|-------|------------------------------------|--|
| 8.2   | Exposure controls                  |  |
| 8.2.1 | Appropriate engineering controls   | Not relevant for this material   |
| 8.2.2 | Personal protection equipment      |  |
|       | Eye/face protection                | Safety glasses recommended (EN166)   |
|       | Hand protection                    | Disposable gloves (EN374)  |
|       | Material of gloves                 | Latex / natural rubber, Nitrile rubber   |
|       | Penetration time of glove material | Gloves resistance is not critical when the product is handled according to the instructions for use. |
|       | Body protection                    | Laboratory coat  |
|       | Respiratory protection             | Not normally required  |
| 8.2.3 | Environmental Exposure Controls    | No special measures are required   |

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

|            |  |   |
|------------|--|---|
| <b>9.1</b> | <b>Information on basic physical and chemical properties</b> |   |
|            | Appearance   | Pair of clear glass slides immersed in a clear liquid |
|            | Colour   | Colourless  |
|            | Odour  | Pungent   |
|            | Odour threshold (ppm)  | Not determined  |
|            | pH (Value)   | 7.6   |
|            | Melting point (°C)/Freezing point (°C)                       | Not determined  |
|            | Boiling point/boiling range (°C)                             | Not determined  |
|            | Flash point (°C)   | Not determined  |
|            | Evaporation rate (BA = 1)                                    | Not determined  |
|            | Flammability (solid, gas)                                    | Not applicable  |
|            | Explosive limit ranges                                       | Not applicable  |
|            | Vapour Pressure (mm Hg)                                      | Not determined  |
|            | Vapour Density (Air=1)                                       | Not determined  |
|            | Density (g/ml)   | Not determined  |
|            | Solubility (Water)   | Soluble   |
|            | Solubility (Other)   | Not determined  |
|            | Partition Coefficient (n-Octanol/water)                      | Not determined  |
|            | Auto Ignition Temperature (°C)                               | Not determined  |
|            | Decomposition Temperature (°C)                               | Not determined  |
|            | Viscosity (mPa.s)  | Not determined  |
|            | Explosive properties   | Not explosive   |
|            | Oxidising properties   | Not oxidising   |
| <b>9.2</b> | <b>Other information</b>                                     | Not available   |

## SECTION 10: STABILITY AND REACTIVITY

|             |   |   |
|-------------|---|---|
| <b>10.1</b> | <b>Reactivity</b>                         | None known  |
| <b>10.2</b> | <b>Chemical stability</b>                 | The product is stable in accordance with the recommended storage conditions |
| <b>10.3</b> | <b>Possibility of hazardous reactions</b> | None known. Hazardous polymerisation will not occur                         |
| <b>10.4</b> | <b>Conditions to avoid</b>                | None  |
| <b>10.5</b> | <b>Incompatible materials</b>             | None known  |
| <b>10.6</b> | <b>Hazardous decomposition product(s)</b> | None known  |

## SECTION 11: TOXICOLOGICAL INFORMATION

|        |   |  |
|--------|---|--|
| 11.1   | <b>Information on toxicological effects</b> |  |
| 11.1.2 | <b>Mixtures</b>                             |  |
|        | Acute toxicity                              | Based upon the available data, the classification criteria are not met |
|        | Irritation                                  | Based upon the available data, the classification criteria are not met |
|        | Corrosivity                                 | Based upon the available data, the classification criteria are not met |
|        | Sensitisation                               | Based upon the available data, the classification criteria are not met |
|        | Repeated dose toxicity                      | Based upon the available data, the classification criteria are not met |
|        | Carcinogenicity                             | Based upon the available data, the classification criteria are not met |
|        | Mutagenicity                                | Based upon the available data, the classification criteria are not met |
|        | Toxicity for reproduction                   | Based upon the available data, the classification criteria are not met |
|        | STOT-single exposure                        | Based upon the available data, the classification criteria are not met |
|        | STOT-repeated exposure                      | Based upon the available data, the classification criteria are not met |
|        | Aspiration hazard                           | Based upon the available data, the classification criteria are not met |
| 11.2   | <b>Other information</b>                    | Not applicable   |

## SECTION 12: ECOLOGICAL INFORMATION

|      |   |   |
|------|---|---|
| 12.1 | <b>Toxicity</b>                           | The product does not contain significant quantities of ingredients that are environmentally toxic |
| 12.2 | <b>Persistence and degradability</b>      | The organic components are substantially biodegradable  |
| 12.3 | <b>Bioaccumulative potential</b>          | None anticipated  |
| 12.4 | <b>Mobility in soil</b>                   | The product is predicted to have high mobility in soil  |
| 12.5 | <b>Results of PBT and vPvB assessment</b> | Not applicable  |
| 12.6 | <b>Other adverse effects</b>              | Not applicable  |

## SECTION 13: DISPOSAL CONSIDERATIONS

|      |                                  |  |
|------|----------------------------------|--|
| 13.1 | <b>Waste treatment methods</b>   | Chemical residues and remains should be routinely handled as special waste. Used arrays should be treated as potentially infectious material. This must be disposed of in compliance with anti-pollution and other laws of the country concerned. To ensure compliance we recommend that you contact the relevant (local) authorities and/or an approved waste-disposal company for information. |
|      | <b>Product:</b>                  |  |
|      | <b>European waste catalogue:</b> |  |
|      | <b>Packaging:</b>                | <ul style="list-style-type: none"> <li>▪ Disposal should be in accordance with local, state or national legislation</li> <li>▪ Contaminated packaging must be disposed of in the same manner as the product</li> <li>▪ Non-contaminated packaging materials may be recycled</li> <li>▪ Contact your local service providers for further information</li> </ul>                                   |

## SECTION 14: TRANSPORT INFORMATION

|      |   |   |
|------|---|---|
| 14.1 | UN number   | Not applicable                            |
| 14.2 | UN proper shipping name   | Not applicable                            |
| 14.3 | Transport hazard class(es)  | Not classified as dangerous for transport |
| 14.4 | Packing group   | Not applicable                            |
| 14.5 | Environmental hazards   | Not applicable                            |
| 14.6 | Special precautions for user  | Not applicable                            |
| 14.7 | Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable                            |



## SECTION 15: REGULATORY INFORMATION

|  |   |  |
|--|---|--|
| 15.1   | <b>Safety, health and environmental regulations/legislation specific for the substance or mixture</b> | Regulation (EC) No. 1907/2006 (REACH), Annex II<br>OSHA Hazard Communication Standard 29 CFR 1910.1200 |
|  | <b>Carcinogen listings</b>  |  |
|  | IARC  | None of the ingredients is listed  |
|  | NTP   | None of the ingredients is listed  |
|  | ACGIH   | None of the ingredients is listed  |
|  | OSHA  | None of the ingredients is listed  |
|  | EPA   | None of the ingredients is listed  |
|  | <b>Californian Proposition 65</b>   |  |
| Chemicals known to cause cancer                | None of the ingredients is listed   |  |
| Chemicals known to cause reproductive toxicity | None of the ingredients is listed   |  |
| <b>SARA</b>                                    |   |  |
| Section 355 (extremely hazardous substances)   | None of the ingredients is listed   |  |
| Section 313 (specific toxic chemical listings) | None of the ingredients is listed   |  |
| 15.2   | <b>Chemical safety assessment</b>   | Not applicable   |

## SECTION 16: OTHER INFORMATION

### LEGEND

|            |                                 |
|------------|---------------------------------|
| STOT       | Specific Target Organ Toxicity  |
| References | Raw material safety data sheets |

### Additional information

Prepared by: **Sengenics** Email: [enquiries@sengenics.com](mailto:enquiries@sengenics.com)

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