# SAFETY DATA SHEET

## AP05 – Pyrene-labelled Rabbit Skeletal Muscle Actin

*Revision: 18 November 2026 | Version 1.0 | Supersedes MSDS dated 14 August 2017*

## 1. Identification of the substance/mixture and of the company/undertaking

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| **1.1 Product identifier** | AP05 — Pyrene-labelled Rabbit Skeletal Muscle Actin |
| **1.2 Relevant identified uses** | Laboratory reagent for in vitro research. Uses advised against: human or veterinary diagnostic, therapeutic, food, household or other non-research use. |
| **1.3 Manufacturer** | Cytoskeleton, Inc., 1830 S. Acoma St., Denver, CO 80223, USA; Tel. +1 303-322-2254. |
| **EU/German supplier** | Tebu-bio GmbH germany@tebubio.com, (069) 801013-0 |
| **1.4 Emergency telephone** | INFOTRAC (source MSDS): USA/Canada 1-800-535-5053; outside USA/Canada +1 352-323-3500 (collect calls accepted). |

## 2. Hazards identification

### 2.1 Classification of the substance or mixture

The mixture is not classified as hazardous under Regulation (EC) No 1272/2008 (CLP).

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| **2.2 Label elements** | The product does not need to be labelled in accordance with EC directives or respective national laws. |
| **2.3 Other hazards** | The lyophilized powder may generate airborne dust causing mechanical irritation. PBT/vPvB assessment: no assessment data available. Endocrine-disrupting properties: no assessment data available. Nanoform: not identified in the source information. |

## 3. Composition/information on ingredients

*3.1.Mixture.*

| Component / Bestandteil | CAS | EC / EG | Content / Gehalt | CLP status / Status |
|---|---|---|---|---|
| Pyrene-labelled actin protein / Pyren-markiertes Actinprotein | None / keine | None / keine | >95% | Not classified / nicht eingestuft |
| N-(1-pyrene) iodoacetamide residue / N-(1-Pyren)-iodacetamid-Rest | 76936-87-3 | None / keine | <1% | Not classified / nicht eingestuft |
| Tris base / Tris-Base | 77-86-1 | Not listed / nicht gelistet | <1% | Not classified / nicht eingestuft |
| Dextran / Dextran | 9004-54-0 | Not listed / nicht gelistet | 1% | Not classified / nicht eingestuft |
| Sucrose / Saccharose | 57-50-1 | 200-334-9 | 5% | Not classified / nicht eingestuft |
| Calcium chloride dihydrate / Calciumchlorid-Dihydrat | 10035-04-8 | Not listed / nicht gelistet | <1% | Not classified / nicht eingestuft |
| Adenosine 5-triphosphate disodium salt / Adenosin-5-triphosphat-Dinatriumsalz | 42373-41-1 | Not listed / nicht gelistet | <1% | Not classified / nicht eingestuft |

## 4. First-aid measures

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| **4.1 Inhalation** | Move to fresh air. If breathing is difficult or symptoms persist, seek medical advice. If not breathing, provide resuscitation by trained personnel and call emergency services. |
| **Skin contact** | Remove contaminated clothing. Wash skin thoroughly with soap and water. Seek medical advice if irritation persists. |
| **Eye contact** | Rinse cautiously with water for at least 15 minutes, removing contact lenses if easy. Seek medical advice if irritation persists. |

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| **Ingestion** | Rinse mouth. Do not induce vomiting unless directed by medical personnel. Seek medical advice if unwell. Never give anything by mouth to an unconscious person. |
| **4.2 Symptoms/effects** | Dust may cause mechanical irritation of eyes, skin, nose and respiratory tract. No delayed effects are known from the available data. |
| **4.3 Immediate care** | If unconscious, call emergency services. Show this safety data sheet to the first responding physician. Treat symptomatically. No specific antidote identified. |

## 5. Firefighting measures

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| **5.1 Extinguishing media** | Use water spray, alcohol-resistant foam, dry powder or carbon dioxide as appropriate for the surrounding fire. No unsuitable media identified. |
| **5.2 Special hazards** | Product is reported as not flammable or combustible. Thermal decomposition may produce irritating or harmful fumes; composition not determined. |
| **5.3 Advice for firefighters** | Wear self-contained breathing apparatus and protective clothing for surrounding fire. Avoid contact with skin and eyes. |

## 6. Accidental release measures

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| **6.1 Personal precautions** | Restrict access. Avoid dust formation and inhalation. Wear gloves, eye protection and suitable protective clothing; use respiratory protection where ventilation is inadequate or dust is generated. |
| **6.2 Environmental precautions** | Prevent release to drains, surface water, groundwater and soil. Do not flush concentrated material to sewer. |
| **6.3 Cleanup** | For dry product, carefully sweep or vacuum with a HEPA-filtered unit without generating dust; place in a labelled closed container. For wetted material, absorb with inert material. Clean residue with water where permitted. |
| **6.4 Reference** | See Sections 8 and 13. |

## 7. Handling and storage

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| **7.1 Safe handling** | Use with adequate ventilation. Avoid creating or breathing dust and avoid eye/skin contact. Keep away from food and drink. Wash hands after handling. Do not reuse the container. |
| **7.2 Storage** | Store tightly closed, dry/desiccated at 2-8 °C. Protect from contamination. Keep only in a suitably labelled container. Incompatible with strong oxidizing agents. |
| **7.3 Specific end use** | This product should only be used for applications described in Section 1.2. |

## 8. Exposure controls/personal protection

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| **8.1 Control parameters** | No occupational exposure limit values exist. |
| **8.2 Engineering controls** | Use local exhaust or enclosure where dust may be generated. Provide eyewash access. |
| **Eye/face protection** | Safety glasses with side shields; tightly fitting goggles where dust exposure is possible (EN 166 or equivalent). |
| **Hand protection** | Protective gloves selected after workplace risk assessment. Confirm material and breakthrough time with the glove supplier (EN ISO 374 where applicable). |
| **Skin/body protection** | Laboratory coat or protective work clothing. Remove contaminated clothing and wash before reuse. |
| **Respiratory protection** | Normally not required with effective controls. If dust cannot be controlled, use a suitable particulate respirator selected under the workplace assessment (e.g., EN 149 P1/P2 as appropriate). |
| **Environmental controls** | Prevent uncontrolled environmental release. |

## 9. Physical and chemical properties

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| **9.1 Physical state** | Solid, lyophilized powder |
| **Color** | No data available |
| **Odor/odor threshold** | No data available |
| **Melting/freezing point** | No data available |

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|---|---|
| **Boiling point/range** | No data available |
| **Flammability** | Reported not flammable or combustible |
| **Explosive limits** | No data available |
| **Flash point** | No data available or not applicable |
| **Auto-ignition temperature** | Product is not reported as self-igniting |
| **Decomposition temperature** | No data available |
| **pH** | No data available |
| **Kinematic viscosity** | No data available or not applicable |
| **Solubility** | Fully miscible/soluble in water per source |
| **Partition coefficient** | No data available |
| **Vapor pressure/density** | Not applicable or no data |
| **Relative density** | No data available |
| **Particle characteristics** | No data available; lyophilized powder |
| **9.2 Other information** | No additional physical hazard or other safety-characteristic data are available. |

## 10. Stability and reactivity

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|---|---|
| **10.1 Reactivity** | No specific test data available. |
| **10.2 Chemical stability** | Stable when stored under recommended storage conditions. |
| **10.3 Hazardous reactions** | No known hazardous reactions under recommended conditions; no test data available. |
| **10.4 Conditions to avoid** | Moisture, contamination, dust formation, repeated freeze/thaw cycles for frozen product, and conditions outside recommended storage. |
| **10.5 Incompatible materials** | Strong oxidizing agents. |
| **10.6 Decomposition products** | Not determined. Irritating or harmful fumes may form in a fire. |

## 11. Toxicological information

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| **11.1 Acute toxicity** | No adequate mixture data available. |
| **Skin corrosion/irritation** | No adequate data. Dust may cause mechanical irritation. |
| **Serious eye damage/irritation** | No adequate data. Dust may cause mechanical irritation. |
| **Respiratory/skin sensitization** | No adequate mixture data available. |
| **Mutagenicity** | No adequate mixture data available. |
| **Carcinogenicity** | No adequate mixture data available. |
| **Reproductive toxicity** | No adequate mixture data available. |
| **STOT single/repeated exposure** | No data available. |
| **Aspiration hazard** | No data available. |
| **Likely routes/symptoms** | Inhalation of dust and contact with eyes or skin may cause mechanical irritation. Ingestion effects unknown. |
| **11.2** Information on other hazards | No additional data available. |

## 12. Ecological information

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|---|---|
| **12.1 Toxicity** | No ecological test data available for the mixture. |
| **12.2 Persistence/degradability** | No data available. |
| **12.3 Bioaccumulative potential** | No data available. |
| **12.4 Mobility in soil** | No data available. |
| **12.5 PBT/vPvB assessment** | No assessment data available. |
| **12.6 Endocrine disruption** | No assessment data available. |
| **12.7 Other adverse effects** | No data available. Avoid uncontrolled environmental release. |

## 13. Disposal considerations

Dispose of product, solutions, absorbents and contaminated packaging through an authorized waste contractor in accordance with Directive 2008/98/EC, the German Circular Economy Act (KrWG), the Waste Catalogue Ordinance (AVV) and local requirements. Do not discharge to drains. The waste producer must assign the appropriate waste code based on actual use and contamination. Treat contaminated packaging as unused product unless fully decontaminated.

## 14. Transport information

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| **14.1 UN number** | Does not meet the criteria for classification as hazardous for transport. |
| **14.2 UN proper shipping name** | Not applicable. |
| **14.3 Transport hazard class(es)** | Not applicable. |
| **14.4 Packing group** | Not applicable. |
| **14.5 Environmental hazards** | Not identified as marine pollutant/environmentally hazardous for transport. |
| **14.6 Special precautions** | Protect from moisture and physical damage; avoid dust release. |
| **14.7 Maritime transport in bulk** | Not intended for bulk transport under IMO instruments. |

## 15. Regulatory information

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| **15.1 Regulations** | Prepared in the structure of REACH Regulation (EC) No 1907/2006, Annex II, as amended by Commission Regulation (EU) 2020/878, and classified provisionally under CLP Regulation (EC) No 1272/2008. German national considerations include the Hazardous Substances Ordinance (GefStoffV) and TRGS 220.<br><br>Not Classified. |
| **15.2 Chemical safety assessment** | No chemical safety assessment information was provided. |

## 16. Other information

Revision scope: converted the 2018 MSDS into the REACH Annex II / Regulation (EU) 2020/878 subsection structure; removed US-only rating content from the main hazard presentation; added Germany/EU regulatory fields. No new toxicological or ecotoxicological test data were supplied.

Abbreviations: ADR, European road transport agreement; CLP, Classification, Labelling and Packaging Regulation; DNEL, derived no-effect level; IATA, International Air Transport Association; IMDG, International Maritime Dangerous Goods Code; PBT, persistent, bioaccumulative, and toxic; PNEC, predicted no-effect concentration; STOT SE, specific target organ toxicity single exposure; UFI, unique formula identifier; vPvB, very persistent and very bioaccumulative.

Sources: Cytoskeleton AP05 MSDS, revised 14 August 2017; Cytoskeleton AP05 product page; Regulation (EC) No 1907/2006 (REACH), Article 31 and Annex II; Commission Regulation (EU) 2020/878; Regulation (EC) No 1272/2008 (CLP); German Hazardous Substances Ordinance (GefStoffV), section 5.

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. The above information is believed to be correct, be all inclusive and shall be used only as a guide. Cytoskeleton Inc. shall not be held liable for any damages resulting from contact with the above product.