Material Safety Data Sheet

1. Identification of the substance/mixture and of the supplier

Product name	Recombinant bovine BMP-4 protein
Manufacturer	Qkine Ltd 1 Murdoch House, Garlic Row, Cambridge, CB5 8HW, United Kingdom Phone: +44 (0)1223 491486 Email: support@qkine.com
Country of origin	United Kingdom
Emergency telephone number	In an emergency call 999 or 112 (or local emergency number) 111 - medical advice in England, Scotland & Wales (NHS Wales 0845 46 47) 18001 111 on a textphone or www.interpreternow.co.uk/nhs111 for NHS British Sign Language (BSL) interpreter service

2. Hazards identification

Classification of substance or mixture	Not a hazardous substance or mixture
GHS classification	Does not meet the classification criteria of the EC Directives 67/548/EEC, 1999/45/EC or 1272/2008
GHS labelling	Does not need to be labelled in accordance with EC directives or respective national laws.
Special hazards	None

3. Composition/information on ingredients

Ingredients	Highly purified recombinant protein originally produced in E.coli (non-pathogenic laboratory strain). Contains no material of animal or human origin. Not produced in baculovirus. For research use only. This product does not contain any hazardous substances at concentrations of 1% or greater. This product is not known to contain carcinogens at a concentration of 0.1% or greater. No MSDS is required.

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4. First aid measures

Eye contact	May cause eye irritation. Immediately flush eyes with plenty of water, then remove any contact lenses and continue to flush eyes with water for 15 minutes. Seek immediate medical attention if irritation persists
Skin contact	May cause skin irritation. Immediately wash off with plenty of soap and water.
Inhalation	No recognised inhalation hazard. If inhaled, remove to fresh air. If breathing becomes difficult, seek immediate medical attention.
Ingestion	No recognised ingestion hazard. If ingested, rinse out mouth with plenty of water.

5. Fire-fighting measures

Classification of substance or mixture	The product is non-flammable.
Suitable extinguishing media	Use extinguishing media appropriate to the surrounding environment
Specific hazards arising from substance	No specific hazards arising from substance
Protective equipment	No special precautions required

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Wear gloves and appropriate eye protection. Prevent inhalation of dust.
Environmental precautions	Do not allow product to enter the drains.
Methods & material for containment and cleaning up	Prevent further leakage or spillage if safe to do so. Use absorbent material to soak up the spillage and dispose of in accordance with applicable laws, environmental legislation and good laboratory practices.

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7. Handling and storage

Handling	Avoid inhalation. Avoid contact with eyes, skin, and clothing.
Storage	Keep vial tightly closed. Store at -80 °C until use.
Additional information	See certificate of analysis for further information on handling and storage.

8. Exposure controls/personal protection

Control parameters	Contains no substances with occupational exposure limit values.
Engineering controls	Use in a laboratory fume hood.
Eye	Wear appropriate eye protection.
Skin	Handle with gloves. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.
Inhalation	Respiratory equipment is not required.

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9. Physical & chemical properties and safety characteristics

Physical state	Lyophilized
Colour	White
Odour	None
Melting point/freezing point	No data available
Boiling point	No data available
Flammability	No data available
Explosion limits	No data available
Flash point	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available
pH	No data available
Viscosity	No data available
Solubility in water	No data available
Partition co-efficient	No data available
Vapour pressure	No data available
Density	No data available
Relative vapour density	No data available
Particle characteristics	No data available

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10. Stability and reactivity

Reactivity	No data available
Chemical stability	Stable under normal use conditions
Possibility of hazardous reactions	None under normal handling and storage conditions
Conditions to avoid	None
Incompatible materials	None
Hazardous decomposition products	None under normal use conditions

11. Toxicological information

Information on toxicological effects	Does not present an acute toxicity hazard based on known or supplied information.

12. Ecological information

Toxicity	Under normal use and conditions, this product is not expected to have an adverse environmental impact.
Persistence and degradability	No data available
Bioaccumulative potential	No data available
Mobility in soil	No data available
Results of PBT and vPvB assessment	No data available
Other adverse effects	No data available

13. Disposal considerations

Waste treatment methods	Dispose of in accordance with applicable laws, environmental legislation and good laboratory practices.

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14. Transport information

UN number	Not regulated
Un proper shipping name	Not regulated
Transport hazard class(es)	Not regulated
Packing group	Not regulated
Environmental hazards	Not regulated
Special precautions for user	Not regulated
Transport in bulk	Not regulated

15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture	Not applicable
Chemical safety assessment	Not applicable

16. Other information

Qkine products are not for use in humans and are not for diagnostic or therapeutic use. Customers agree to comply with the provisions of applicable international and local statutes, rules, regulations, ordinances and orders when using Qkine products.

Qkine products are for internal research purposes only and not for resale or transfer in any form (including as part of a kit) to a third party unless agreed with Qkine in writing.

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