

Material Safety Data Sheet

Recombinant human BMP2 protein (Qk007)

BMP2 protein is a potent differentiation factor and directs human pluripotent stem cells towards extra-embryonic endoderm, mesenchymal and neural lineages, and chondrocytes. Recombinant BMP2 protein induces bone and cartilage formation *in vitro* and chondrogenesis in human adult mesenchymal stem cells.

Qkine products are not for use in humans and are not for diagnostic or therapeutic use.

The protein is provided lyophilized, carrier protein free, sodium azide-free and animal-derived component free.

Manufacturer

Qkine Ltd

152 Cambridge Science Park, Milton Road, Cambridge, CB4 0GN, United Kingdom

Phone: 01223 491486

Country of Origin: United Kingdom

Our products are for research use only and not for diagnostic or therapeutic use.

Emergency telephone number: in an emergency call 999 or 112

For medical advice in England, Scotland and Wales, call 111 or go online to 111.nhs.uk (for people aged 5 and over only). For areas of Wales not covered by 111, call NHS Direct Wales (0845 46 47)

To use the NHS 111 British Sign Language (BSL) interpreter service go to www.interpreternow.co.uk/nhs111. You can also call 18001 111 on a textphone.

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

Composition / Information on Ingredients

Ingredients: 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.

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.

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

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 and 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.

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.

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.

Physical and Chemical Properties & Safety Characteristics

Physical State: lyophilized

Colour: clear

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 - n-octanol/water (log value): no data available

Vapour Pressure: no data available

Density: no data available

Relative Vapour Density: no data available

Particle Characteristics: no data available

Stability and Reactivity

Reactivity: no data available

Chemical stability: stable under normal use conditions

Possibility of hazardous reactions: no hazardous reactions will occur under normal handling and storage conditions

Conditions to avoid: none

Incompatible materials: none

Hazardous decomposition products: none under normal use conditions

Toxicological Information

Information on toxicological effects: Product does not present an acute toxicity hazard based on known or supplied information

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

Disposal Considerations

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

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 according to Annex II of MARPOL[5] and the IBC Code: not regulated

Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture: not applicable

Chemical safety assessment: not applicable

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.

Qkine is not responsible for patent infringement or other violations which may occur with the use of these products.

Revision Number: 1.0 September 2020