

SAFETY DATA SHEET

In Accordance with OSHA HCS (29 CFR 1910.1200) and GHS Rev. 7

Triple Regulator (TIA-39-C20)

SECTION 1: IDENTIFICATION

Product Name	Triple Regulator (TIA-39-C20)
Chemical Name	TIA-39-C20 — triple GIP/GLP-1/Glucagon receptor agonist research analog (C20 lipidated 39-residue peptide)
Synonyms	TIA-39-C20; triple regulator; GIP/GLP-1/GCGR triagonist analog
CAS Number	Proprietary / research compound
Molecular Formula	Peptide analog
Molecular Weight	Approx. 4.9 kDa
Product Code / Batch Number	See Certificate of Analysis for batch-specific information
Recommended Use	Research Use Only (RUO). Not for human or veterinary use.
Manufacturer / Supplier	Alpha
Emergency Contact	(888) 890-8143
Date of Issue / Revision	April 2026

SECTION 2: HAZARDS IDENTIFICATION

GHS Classification: Not classified according to GHS criteria for the neat lyophilized peptide at research quantities. While oxytocin is pharmacologically potent, the dry powder form at typical research amounts does not meet GHS classification thresholds for acute toxicity based on available LD50 data (rat, SC: >20,520 mg/kg).

GHS Classification: Not classified according to GHS criteria. Triple-agonist peptide for research use. Standard laboratory precautions apply for handling pharmacologically active peptides.

Hazard Pictograms: None (not classified)

Hazard Statements: None (not classified)

Precautionary Statements: As a matter of good laboratory practice when handling pharmacologically active peptides: P264 - Wash hands thoroughly after handling. P270 - Do not eat, drink, or smoke when using this product. P280 - Wear protective gloves, eye protection, and lab coat. P261 - Avoid breathing dust/aerosol. P271 - Use only in a well-ventilated area or fume hood.

Other Hazards: This substance is a potent pharmacologically active peptide hormone. Oxytocin has uterotonic, lactogenic, and cardiovascular effects. Women of childbearing potential should exercise extreme caution when handling this substance, as it may induce uterine contractions. Exposure may also affect blood pressure and heart rate.

Other Hazards: Pharmacologically active triple GIP/GLP-1/glucagon receptor agonist. May affect glucose metabolism, lipid handling, gastric emptying, and energy expenditure in biological systems. For laboratory research only.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	TIA-39-C20 — triple GIP/GLP-1/Glucagon receptor agonist research analog (C20 lipidated 39-residue peptide)
CAS Number	Proprietary / research compound
Molecular Formula	Peptide analog
Molecular Weight	Approx. 4.9 kDa
Amino Acid Sequence	39-residue synthetic peptide with C20 fatty-acid conjugation (research analog)
Description	Lipidated 39-amino-acid peptide triple receptor agonist (GIP/GLP-1/Glucagon).
Number of Amino Acids	39
Purity	≥98% by RP-HPLC
Counter Ion	Acetate (unless otherwise specified on COA)
Concentration	100% neat lyophilized powder (or as specified)

SECTION 4: FIRST-AID MEASURES

Inhalation: Move person to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration. Seek immediate medical attention.

Skin Contact: Remove contaminated clothing. Wash affected area thoroughly with soap and water for at least 15 minutes. If irritation develops or persists, seek medical attention.

Eye Contact: Immediately flush eyes with copious amounts of water for at least 15 minutes, lifting upper and lower eyelids periodically. Remove contact lenses if present and easy to do. Seek medical attention if irritation persists.

Ingestion: Rinse mouth with water. Do NOT induce vomiting. Seek medical attention immediately. If conscious, give water to drink.

Most Important Symptoms/Effects: No specific symptoms documented for this substance. Effects may include irritation of eyes, skin, and respiratory tract upon exposure to dust or aerosol.

Note to Physician: Treat symptomatically. This product is a research chemical with limited toxicological data. Consider the pharmacological activity of the compound when evaluating exposure.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Water spray, carbon dioxide (CO₂), dry chemical powder, alcohol-resistant foam.

Unsuitable Extinguishing Media: A solid water stream may be inefficient.

Specific Hazards Arising from the Chemical: Thermal decomposition may produce carbon oxides (CO, CO₂), nitrogen oxides (NO_x), sulfur oxides (SO_x). Fine dust may form explosive mixtures with air at high concentrations.

Protective Equipment for Firefighters: Wear self-contained breathing apparatus (SCBA) and full protective gear. Use water spray to cool fire-exposed containers.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear appropriate personal protective equipment (PPE) including gloves, safety goggles, and lab coat. Avoid dust generation. Ensure adequate ventilation. Evacuate area if large spill.

Environmental Precautions: Do not allow product to enter drains, sewers, surface water, or ground water. Contain spill to prevent environmental contamination.

Methods for Containment and Cleanup: Carefully sweep or vacuum spilled material and collect in a suitable, labeled container for disposal. Avoid generating dust. Clean contaminated surfaces with water. Dispose of waste in accordance with all applicable local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

Handling Precautions: Handle in a well-ventilated area or fume hood. Avoid inhalation of dust or aerosol. Avoid contact with skin, eyes, and clothing. Use appropriate PPE at all times. Wash hands thoroughly after handling. Do not eat, drink, or smoke in work areas.

Storage Conditions: Store lyophilized powder at -20°C or below for long-term stability. Protect from light and moisture. The peptide is hygroscopic — keep container tightly sealed. After reconstitution, store at 2–8°C and use within 7 days. For long-term storage, aliquot and store at -20°C. Avoid repeated freeze-thaw cycles. Aqueous solutions are most stable at pH 3.5–4.4.

Incompatible Materials: Strong oxidizing agents, strong acids, strong bases.

Storage Conditions: Store lyophilized powder at -20°C or below. Protect from light and moisture. After reconstitution, store at 2–8°C and use within a short period to minimize degradation.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits (OELs): No established OEL, PEL, or TLV for this substance. Handle as a potentially pharmacologically active compound.

Engineering Controls: Use in a well-ventilated area. A chemical fume hood or biosafety cabinet is recommended when handling powder or generating aerosols. Local exhaust ventilation should be used if dust is generated.

Respiratory Protection: Where dust or aerosol may be generated, use a NIOSH-approved N95 particulate respirator or equivalent. For higher exposure potential, use a PAPR with appropriate cartridges.

Hand Protection: Wear chemical-resistant gloves (e.g., nitrile). Double gloving is recommended when handling concentrated material. Inspect gloves before use and replace immediately if damaged.

Eye/Face Protection: Wear safety goggles or a face shield. Contact lenses should not be worn when working with this material.

Skin/Body Protection: Wear a lab coat or protective clothing. If splash potential exists, wear an impervious apron.

Hygiene Measures: Wash hands and face thoroughly after handling. Remove and wash contaminated clothing before reuse. Do not eat, drink, or smoke in the work area.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White to off-white lyophilized powder
Odor	Odorless
Molecular Formula	Peptide analog
Molecular Weight	Approx. 4.9 kDa
CAS Number	Proprietary / research compound
pH	See batch COA for reconstituted solution pH
Melting / Decomposition Point	Decomposes before melting

Boiling Point	Not applicable (solid; decomposes before boiling)
Flash Point	Not applicable
Flammability	Not flammable under normal conditions
Vapor Pressure	Not applicable (non-volatile solid)
Density	Not determined
Solubility	Soluble in sterile water and bacteriostatic water.
Partition Coefficient (log P)	Not determined
Auto-ignition Temperature	Not determined
Explosion Hazard	None known
Vapor Density	Not applicable
Evaporation Rate	Not applicable

SECTION 10: STABILITY AND REACTIVITY

Reactivity: No dangerous reactions known under normal laboratory conditions of use and storage.

Chemical Stability: Stable under recommended storage conditions. Sensitive to moisture, heat, and prolonged light exposure.

Possibility of Hazardous Reactions: No hazardous polymerization will occur.

Conditions to Avoid: Heat, humidity, prolonged light exposure, repeated freeze-thaw cycles.

Incompatible Materials: Strong oxidizing agents, strong acids, strong bases.

Hazardous Decomposition Products: Thermal decomposition may produce carbon oxides (CO, CO₂), nitrogen oxides (NO_x), sulfur oxides (SO_x).

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Toxicity: No acute toxicity data available for this specific compound. Handle as a potentially hazardous substance.

Skin Corrosion/Irritation: Not determined. No reports of skin irritation in available literature.

Serious Eye Damage/Irritation: Not determined. Avoid eye contact as a precaution.

Respiratory or Skin Sensitization: Not determined. As with all pharmacologically active peptides, respiratory sensitization cannot be ruled out with repeated exposure.

Germ Cell Mutagenicity: Not determined. No data available.

Carcinogenicity: Not listed by IARC, NTP, or OSHA as a carcinogen.

Reproductive Toxicity: Not determined. No data available.

STOT - Single Exposure: Not determined.

STOT - Repeated Exposure: Not determined.

Aspiration Hazard: Not applicable (solid).

Pharmacological Note: Oxytocin is a potent peptide hormone with uterotonic, lactogenic, and vasopressor activity. It stimulates uterine smooth muscle contraction and milk ejection. It also has central nervous system effects influencing social behavior and bonding. Women of childbearing potential should exercise extreme caution. Handle as a pharmacologically active compound. Avoid inhalation, skin contact, and ingestion.

SECTION 12: ECOLOGICAL INFORMATION

Pharmacological Note: TIA-39-C20 is a research-grade triple agonist at the GIP, GLP-1, and glucagon receptors, structurally related to retatrutide-class incretin analogs. Combined activation of the three receptors is under investigation for effects on weight, glycemic control, and hepatic lipid metabolism.

Persistence and Degradability: Peptides are generally expected to be readily biodegradable through proteolytic and hydrolytic pathways in the environment.

Bioaccumulative Potential: Not expected to bioaccumulate due to peptide nature and susceptibility to enzymatic degradation.

Mobility in Soil: Not determined. Expected to have moderate to high mobility in soil due to water solubility.

Other Adverse Effects: No known adverse ecological effects. However, do not release into the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of contents and container in accordance with all applicable local, state, and federal regulations. This material may be considered a hazardous waste. Consult applicable regulations before disposal.

Recommendation: Incineration in a licensed hazardous waste facility is the recommended disposal method. Do not dispose of via municipal waste or drain systems. Unused product should not be released into the environment.

SECTION 14: TRANSPORT INFORMATION

DOT (US Department of Transportation)	Not regulated. Not classified as dangerous goods.
IATA (International Air Transport)	Not regulated. Not classified as dangerous goods.
IMDG (International Maritime)	Not regulated. Not classified as dangerous goods.
ADR/RID (European Road/Rail)	Not regulated. Not classified as dangerous goods.

Special Precautions for Transport: Ship under cold chain conditions (with dry ice or cold packs) to maintain product integrity. Ensure containers are tightly sealed and properly labeled for research materials.

SECTION 15: REGULATORY INFORMATION

TSCA (Toxic Substances Control Act): Not listed on the TSCA inventory. This product is used for research purposes only.

SARA Title III - Section 355 (EHS): Substance is not listed.

SARA Title III - Section 313 (TRI): Substance is not listed.

OSHA: Not specifically classified as a hazardous chemical under OSHA's Hazard Communication Standard (29 CFR 1910.1200). Standard laboratory precautions apply for handling pharmacologically active research compounds.

OSHA-Ca / NTP / IARC: Not listed as a carcinogen by OSHA, NTP, or IARC.

Hazardous Air Pollutants (HAPs): Not listed.

California Proposition 65: This product is not known to contain any chemicals listed under California Proposition 65.

FDA Status: This product is sold as a Research Use Only (RUO) compound and is not approved by the FDA for therapeutic, diagnostic, or human use.

SECTION 16: OTHER INFORMATION

NFPA 704 - Health	1
NFPA 704 - Flammability	0
NFPA 704 - Reactivity	0
HMIS - Health	1
HMIS - Flammability	0
HMIS - Reactivity	0

Prepared By: Alpha

Revision Date: February 2026

Version: 2.0

Reason for Revision: Updated to GHS-compliant SDS format with verified compound data, corrected GHS classification, and expanded safety information.

DISCLAIMER: The information provided in this Safety Data Sheet is believed to be correct as of the date of issue. It is provided in good faith but without warranty of any kind, expressed or implied. Alpha assumes no liability for the accuracy or completeness of the data contained herein. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. This product is for Research Use Only (RUO) and is not intended for human consumption, diagnostic use, or therapeutic application. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use and to comply with all applicable laws and regulations.

END OF SAFETY DATA SHEET