

Revision Date:15-Jan-2020

Section 1-Identification of Substance/	Identification of Company	
Product name	Casein beta, beta-Casomorphin-4	
Product Cat. No.	302146	
Chemical Formula:	$C_{28}H_{36}N_4O_6$	
Supplier:	NovoPro Bioscience Inc.	
11	Phone: +86-21-61941042	
	Fax: 86-216-194-1042	
Section 2-Composition / Information on Ingredients		
Substance/Preparation:	Substance	
Ingredient Name	Casein beta, beta-Casomorphin-4	
SARA 313	No	
Section 3- Hazards Identification		
Classification	This substance/mixture is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)	
GHS Label elements, including precautionary statements		
Signal Word	Not classified	
Hazard statement(s)	None.	
Precautionary Statement(s)	None.	
Supplementary Hazard Information	May produce an allergic reaction	
Hazards not otherwise classified	Not applicable.	
(HNOC)		
For additional information on toxicity, please refer to Section 11.		

Section 4- First Aid Measures	
Oral Exposure	If swallowed, wash out mouth with water provided person
	is conscious. Call a physician.
Inhalation Exposure	If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.
Dermal Exposure	In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.
Eye Exposure	In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.
Section 5- Fire Fighting Measu	res
Flash Point	Not available
Autoignition Temp	Not available
Flammability	Not available
Extinguishing Media	
Suitable	Carbon dioxide, dry chemical powder, or appropriate foam.
	Water spray
Fire Fighting	
Protective Equipment	Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s)	Emits toxic fumes under fire conditions.
	1 / 4



Section 6- Accidental Release Measures Procedure to be Followed in Case of Leak or Spill Evacuate area Procedure(s) of Personal Precaution(s) Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves Methods for Cleaning up Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves Section 7-Handling and Storage
Leak or Spill Procedure(s) of Personal Precaution(s)Wear respirator, chemical safety goggles, rubber boots, and heavy rubber glovesMethods for Cleaning upSweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.Section 7-Handling and Storage
Procedure(s) of Personal Precaution(s) Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves Methods for Cleaning up Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete. Section 7-Handling and Storage Handling Handling Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Storage Suitable Suitable Keep tightly closed Storage at -20°C Mechanical exhaust required Personal Protective equipment Mechanical exhaust required Personal Protective equipment Use respiratory and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (US) or CEN (US) respiratory protection is not required. Other Wear appropriate government approved respirator, chemical resistant gloves, safety goggles, other protective clothing. General Hygiene Measures Wash thoroughly after handling Section 9- Physical and Chemical Properties Appearance Physical State Powder Property Molecular Weight 524.6 pH Not available MP/MP Range Not available MP/MP Range Not available
and heavy rubber glovesMethods for Cleaning upSweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.Section 7-Handling and Storage
Methods for Cleaning up Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete. Section 7-Handling and Storage
Avoid raising dust. Ventilate area and wash spill site after material pickup is complete. Section 7-Handling and Storage Handling User Exposure Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Storage Suitable Storage at -20°C Keep tightly closed Section 8-Exposure Controls/Personal Protection Equipment Engineering Controls Mechanical exhaust required Personal Protective equipment Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) respirator. Other Wear appropriate government approved respirator. chemical-resistant gloves, safety goggles, other protective clothing. General Hygiene Measures Wash thoroughly after handling Section 9- Physical and Chemical Properties Appearance Physical State Powder Property Molecular Weight Molecular Weight 524.6 pH Not available M/MP Range Not available MP/MP Range Not available MP/MP Range Not available Morearia Not availab
Section 7-Handling and Storage Handling User Exposure Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Storage Sutable Keep tightly closed Storage at -20°C Keep tightly closed Section 8-Exposure Controls/Personal Protection Equipment Engineering Controls Mechanical exhaust required Personal Protective equipment Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) respirator. Other Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing. General Hygiene Measures Wash thoroughly after handling Section 9- Physical and Chemical Properties Molecular Weight Appearance Property 524.6 pH pH Not available MP/MP Range Not available MP/MP Range Not available Property Not available Molecular Weight 524.6 pH PH Not available MP/MP Range Not available MP/MP Range Not available MP/MP Range
Section 7-Handling and Storage Handling User Exposure Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Storage Suitable Keep tightly closed Storage at -20°C Keep tightly closed Section 8-Exposure Controls/Personal Protection Equipment Mechanical exhaust required Personal Protective equipment Mechanical exhaust required Respiratory Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Other Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) respirator. Other Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing. General Hygiene Measures Wash thoroughly after handling Section 9- Physical and Chemical Properties Appearance Physical State Powder Property Molecular Weight Molecular Weight 524.6 pH PH Not available MP/MP Range Not available MP/MP Range Not available MP/MP Range Not available More variable Not available
Handling Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Storage Suitable Keep tightly closed Storage at -20°C Section 8-Exposure Controls/Personal Protection Equipment Engineering Controls Mechanical exhaust required Personal Protective equipment We respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) respirator. Other Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing. General Hygiene Measures Wash thoroughly after handling Section 9- Physical and Chemical Properties Appearance Appearance Powder Property Molecular Weight Molecular Weight 524.6 pH Not available MP/MP Range Not available MP/MP Range Not available MP/MP Range Not available Vapor Pressure Not available
Handling Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Storage Suitable Keep tightly closed Storage at -20°C Section 8-Exposure Controls/Personal Protection Equipment Engineering Controls Mechanical exhaust required Personal Protective equipment We respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) respirator. Other Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing. General Hygiene Measures Wash thoroughly after handling Section 9- Physical and Chemical Properties Appearance Appearance Powder Property Molecular Weight Molecular Weight 524.6 pH Not available MP/MP Range Not available MP/MP Range Not available MP/MP Range Not available Vapor Pressure Not available
User ExposureAvoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.StorageSuitableKeep tightly closedSuitableKeep tightly closedStorage at -20°CProtection EquipmentEngineering ControlsMechanical exhaust requiredPersonal Protective equipmentUse respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) respirator. OtherOtherWear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.General Hygiene MeasuresWash thoroughly after handlingSection 9- Physical and Chemical PropertiesPowderMolecular Weight pH524.6 pHpHNot available MP/MP RangeM/MP RangeNot available Not availableMP/MP RangeNot available Not availableMP/MP RangeNot available Not availableMolecular Weight property524.6 Not availableMolecular Weight pHNot available Not availableMolecular Weight pHSuble Not availableMolecular Weight pHSuble Not availableMolecular Weight pHSuble Not availableMolecular Weight pHSuble Not availableMolecular Weight pHSuble Not availableMolecular Weight pHSuble Not availableMolecular Weight pHS
clothing. Avoid prolonged or repeated exposure.Storage Suitable Storage at -20°CKeep tightly closedSection 8-Exposure Controls/Personal Protection EquipmentMechanical exhaust requiredEngineering Controls Personal Protective equipment RespiratoryMechanical exhaust requiredRespiratoryUse respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) respirator. OtherOtherWear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.General Hygiene MeasuresWash thoroughly after handlingSection 9- Physical and Chemical Properties Appearance PropertyPowderMolecular Weight BP/BP Range524.6 pH Not availableMP/MP Range MP/MP RangeNot available Not availableMP/MP Range PropertyNot available
Storage Suitable Keep tightly closed Storage at -20°C Section 8-Exposure Controls/Personal Protection Equipment Engineering Controls Mechanical exhaust required Personal Protective equipment Weer espirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Other Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) respirator. Other Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing. General Hygiene Measures Wash thoroughly after handling Section 9- Physical and Chemical Properties Appearance Physical State Powder Property Molecular Weight Molecular Weight 524.6 pH Not available BP/BP Range Not available MP/MP Range Not available MP/MP Range Not available Mange Not available MP/MP Range Not available More Pressure Not available
Suitable Storage at -20°CKeep tightly closedSection 8-Exposure Controls/Personal Protection EquipmentEngineering ControlsMechanical exhaust requiredPersonal Protective equipmentWere respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) respirator. OtherOtherWear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.General Hygiene MeasuresWash thoroughly after handlingSection 9- Physical and Chemical PropertiesPowderAppearancePowderProperty524.6pHNot availableBP/BP RangeNot availableMP/MP RangeNot availableMP/MP RangeNot availableMP/MP RangeNot availableMP/MP RangeNot availableVapor PressureNot available
Storage at -20°C Section 8-Exposure Controls/Personal Protection Equipment Engineering Controls Mechanical exhaust required Personal Protective equipment We respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Respiratory Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Other Wear appropriate government approved respirator. Other Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing. General Hygiene Measures Wash thoroughly after handling Section 9- Physical and Chemical Properties Appearance Physical State Powder Property Freezing Point Molecular Weight 524.6 pH Not available MP/MP Range Not available MP/MP Range Not available MP/MP Range Not available Vapor Pressure Not available
Section 8-Exposure Controls/Personal Protection Equipment Engineering Controls Mechanical exhaust required Personal Protective equipment Wechanical exhaust required Respiratory Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) respirator. Other Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing. General Hygiene Measures Wash thoroughly after handling Section 9- Physical and Chemical Properties Appearance Physical State Powder Property Molecular Weight 524.6 pH Not available Not available MP/MP Range Not available MP/MP Range Not available MP/MP Range Not available Vapor Pressure Not available
Engineering Controls Mechanical exhaust required Personal Protective equipment Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) respirator. Other Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing. General Hygiene Measures Wash thoroughly after handling Section 9- Physical and Chemical Properties Appearance Physical State Powder Property Molecular Weight 524.6 pH Molecular Weight 524.6 pH Not available MP/MP Range Not available MP/MP Range Not available MP/MP Range Not available Vapor Pressure Not available
Personal Protective equipment Respiratory Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) respirator. Other Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing. General Hygiene Measures Wash thoroughly after handling Section 9- Physical and Chemical Properties Appearance Physical State Powder Property 524.6 Molecular Weight 524.6 pH Not available BP/BP Range Not available MP/MP Range Not available MP/MP Range Not available Yapor Pressure Not available
RespiratoryUse respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) respirator.OtherWear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.General Hygiene MeasuresWash thoroughly after handlingSection 9- Physical and Chemical PropertiesAppearancePhysical StatePowderPropertyVear availableMolecular Weight524.6pHNot availableBP/BP RangeNot availableMP/MP RangeNot availableFreezing PointNot availableVapor PressureNot available
under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) respirator.
(US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) respirator. Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.General Hygiene MeasuresWash thoroughly after handlingSection 9- Physical and Chemical PropertiesAppearance PropertyMolecular Weight BP/BP Range524.6 Not availableMP/MP Range Freezing Point Vapor PressureNot available Not availableMolecular Vapor PressureNot available
Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) respirator. Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.General Hygiene MeasuresWash thoroughly after handlingSection 9- Physical and Chemical PropertiesAppearancePhysical StatePowderPropertyMolecular Weight524.6pHNot availableBP/BP RangeNot availableMP/MP RangeNot availableFreezing PointNot availableVapor PressureNot available
Otheruse type N95 (US) or type P1 (EN 143) respirator. Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.General Hygiene MeasuresWash thoroughly after handlingSection 9- Physical and Chemical PropertiesAppearancePhysical StatePowderPropertyNot availableBP/BP RangeNot availableMP/MP RangeNot availableFreezing PointNot availableVapor PressureNot available
OtherWear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.General Hygiene MeasuresWash thoroughly after handlingSection 9- Physical and Chemical PropertiesAppearancePhysical StatePowderPropertyMolecular WeightMolecular Weight524.6pHNot availableBP/BP RangeNot availableMP/MP RangeNot availableFreezing PointNot availableVapor PressureNot available
chemical-resistant gloves, safety goggles, other protective clothing.General Hygiene MeasuresWash thoroughly after handlingSection 9- Physical and Chemical PropertiesAppearancePhysical StatePowderPropertyMolecular Weight524.6pHNot availableBP/BP RangeNot availableMP/MP RangeNot availableFreezing PointNot availableVapor PressureNot available
Clothing.General Hygiene MeasuresWash thoroughly after handlingSection 9- Physical and Chemical PropertiesAppearancePhysical StatePowderPropertyMolecular Weight524.6pHNot availableBP/BP RangeNot availableMP/MP RangeNot availableFreezing PointNot availableVapor PressureNot available
General Hygiene MeasuresWash thoroughly after handlingSection 9- Physical and Chemical PropertiesAppearancePowderPhysical StatePowderPropertyNot availableMolecular Weight524.6pHNot availableBP/BP RangeNot availableMP/MP RangeNot availableFreezing PointNot availableVapor PressureNot available
Section 9- Physical and Chemical PropertiesAppearancePhysical StatePowderPropertyMolecular Weight524.6pHNot availableBP/BP RangeNot availableMP/MP RangeNot availableFreezing PointNot availableVapor PressureNot available
AppearancePhysical StatePowderPropertyMolecular Weight524.6pHNot availableBP/BP RangeNot availableMP/MP RangeNot availableFreezing PointNot availableVapor PressureNot available
AppearancePhysical StatePowderPropertyMolecular Weight524.6pHNot availableBP/BP RangeNot availableMP/MP RangeNot availableFreezing PointNot availableVapor PressureNot available
Physical StatePowderProperty524.6pHS24.6pHNot availableBP/BP RangeNot availableMP/MP RangeNot availableFreezing PointNot availableVapor PressureNot available
PropertyMolecular Weight524.6pHNot availableBP/BP RangeNot availableMP/MP RangeNot availableFreezing PointNot availableVapor PressureNot available
Molecular Weight524.6pHNot availableBP/BP RangeNot availableMP/MP RangeNot availableFreezing PointNot availableVapor PressureNot available
pHNot availableBP/BP RangeNot availableMP/MP RangeNot availableFreezing PointNot availableVapor PressureNot available
BP/BP RangeNot availableMP/MP RangeNot availableFreezing PointNot availableVapor PressureNot available
MP/MP RangeNot availableFreezing PointNot availableVapor PressureNot available
Freezing PointNot availableVapor PressureNot available
Vapor Density Not available
Saturated Vapor Conc. Not available
SG/Density Not available
Bulk Density Not available
Odor Threshold Not available
Volatile% Not available
Volatile%Not availableVOC ContentNot available
Volatile%Not availableVOC ContentNot availableWater ContentNot available
Volatile%Not availableVOC ContentNot availableWater ContentNot availableSolvent ContentNot available
Volatile%Not availableVOC ContentNot availableWater ContentNot availableSolvent ContentNot availableEvaporation RateNot available
Volatile%Not availableVOC ContentNot availableWater ContentNot availableSolvent ContentNot available



Partition Coefficient Decomposition Temp. Flash Point Explosion Limits Flammability Autoignition Temp Refractive Index Optical Rotation Miscellaneous Data Solubility	Not available Not available Not available Not available Not available Not available Not available Not available Not available Not available
Section 10- Stability and Reactivity	
Stability Stable Hazardous Decomposition Products Hazardous Decomposition Products Hazardous Polymerization Hazardous Polymerization	Stable Nature of decomposition products not known. Will not occur
Section 11- Toxicological Information	
Route of Exposure Skin Contact Eye contact Inhalation	Avoid contact with skin. Avoid contact with eyes. May cause slight irritation. Avoid breathing vapors or mists. May cause irritation of respiratory tract.
Ingestion Conditions Aggravated by Exposure	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. The toxicological properties have not been thoroughly investigated.

This product is for experimental uses only. The product has not been completely analyzed and all of the hazards may not be known.

Section 12- Ecological Information	
No data available.	
Section 13- Disposal Considerations	
Appropriate Method of Disposal of Substance or Preparation	Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.
Section 14- Transport Information	
DOT	
Proper Shipping Name	None
Non-Hazardous for Transport	This substance is considered to be non-hazardous for transport.
IATA	
Non-Hazardous for Air Transport	Non-hazardous for air transport



Section 15- Regulatory Information	
US Classification and Label Text	
US Statements	Caution: The chemical, physical, and toxicological properties of this product have not been thoroughly investigated. Exercise due care.
United States Regulatory information	
SARA Listed	No
Canada Regulatory information	
WHMIS Classification	This product has been classified in accordance with the
	hazard criteria of the CPR, and the MSDS contains all the
	information required by the CPR.
DSL	No
NDSL	No

Section 16- Other Information

NovoPro corporation MSDS is believed to be correct but only used as a guide for experienced personnel, NovoPro shall not be held liable for any damage resulting from the handling or from contact with the above product.