



PBL InterferonSource

Section 1: Product and Company Identification

Product Name: Antibodies and Interferon Products

Document # MSDS1000 Rev.01

Effective Date: 9/28/2007

Manufacturer: PBL Biomedical Laboratories
131 W Ethel Road
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Piscataway, NJ 08854 USA
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This MSDS is applicable to the following products in accordance with OSHA CFR 29 1910.1200 and includes products exempt from requiring MSDS for informational purposes.

Product Number	Product Name	Composition
11001	Human IFN Alpha Sampler (12 individual species)	< 1% Bovine Serum Albumin (BSA)
11100	Human IFN Alpha A (Alpha 2a)	< 1% BSA
11101	Human IFN Alpha A, carrier- free	None
11105	Human IFN Alpha 2 (Alpha 2b)	< 1% BSA
11115	Human IFN Alpha B2 (Alpha 8)	< 1% BSA
11120	Human IFN Alpha C (Alpha 10)	< 1% BSA
11125	Human IFN Alpha D (Alpha1{Val 114})	< 1% BSA
11130	Human IFN Alpha F (Alpha 21)	< 1% BSA
11135	Human IFN Alpha G (Alpha 5)	< 1% BSA
11145	Human IFN Alpha H2 (Alpha 14)	< 1% BSA
11150	Human IFN Alpha I (Alpha 17)	< 1% BSA
11160	Human IFN Alpha J1 (Alpha 7)	< 1% BSA
11165	Human IFN Alpha K (Alpha 6)	< 1% BSA
11175	Human IFN Alpha 1 (Alpha D {Ala 114})	< 1% BSA
11177	Human IFN Alpha 4a (Alpha M1)	< 1% BSA
11180	Human IFN Alpha 4b (Alpha 4)	< 1% BSA
11190	Human IFN Alpha WA (Alpha 16)	< 1% BSA
11200	Universal Type 1 IFN {Human IFN Alpha A/D (Bg111)}	< 1% BSA
11350	Human leukocyte IFN	None
11395	Human IFN Omega	≤ 2% BSA
11410	Human IFN Beta 1 a, mammalian	None
11420	Human IFN Beta 1 b, E. coli	< 1% BSA
11450	Human IFN Kappa	None
11500	Human IFN Gamma	< 1% BSA
11580	Human IFN Gamma Soluble Receptor Chain 1	< 1% BSA
11810	Human Interleukin-2	< 1% BSA
11815	Human Interleukin-3	< 1% BSA
11960	Granulocyte-Macrophage Colony Stimulating Factor (GM-CSF)	< 1% BSA
11965	Erythropoietin (EPO)	< 1% BSA



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Product Number	Product Name	Composition
11970	Human Growth Hormone (HGH)	None
11972	Human growth Hormone Releasing Factor (1-44), amide	None
11974	Human growth Hormone Releasing Factor (1-29), amide	None
11976	Thymosin Alpha 1	None
12100	Mouse IFN Alpha A	< 1% BSA
12105	Mouse IFN Alpha 1	< 1% BSA
12110	Mouse Interferon alpha 4, E. coli	< 1% BSA
12125	Mouse Interferon alpha 11	< 1% BSA
12130	Mouse Interferon alpha 13	< 1% BSA
12295	Mouse Limitin	< 1% BSA
12400	Mouse IFN Beta	< 1% BSA
12401	Mouse IFN Beta, carrier free	None
12500	Mouse IFN Gamma	< 1% BSA
12501	Mouse IFN Gamma, carrier free	None
12580	Mouse IFN Gamma Soluble Receptor Chain 1	< 1% BSA
13100	Rat IFN Alpha	< 1% Rat Serum Albumin (RSA)
13400	Rat IFN Beta	None
13500	Rat IFN Gamma	< 1% BSA
13501	Rat IFN Gamma, carrier free	None
14110	Rhesus Cynomolgous Monkey IFN Alpha2	< 1% BSA
15100	Feline IFN Alpha	< 1% BSA
16100	Cynomolgus Interferon Alpha 2 [Ile 16]	< 1% BSA
17100	Porcine IFN Alpha	< 1% BSA
18610	Ovine IFN Tau	< 1% BSA
19610	Bovine IFN Tau	< 1% BSA
21100	Mab to Human IFN-Alpha, Mouse IgG1 K, neutralizing, clone (MMHA-2)	< 1% BSA
21101	MAB to Human IFN-Alpha, Mouse IgG1 K, non-neutralizing, clone (MMHA-3)	< 1% BSA
21105	MAB to Human IFN-Alpha, Mouse IgG1 K, neutralizing, clone (MMHA-1)	< 1% BSA
21110	MAB to Human IFN-Alpha, Mouse IgG2b K, neutralizing, clone (MMHA-8)	< 1% BSA
21112	MAB to Human IFN-Alpha, Mouse IgG1 K, neutralizing, clone (MMHA-11)	< 1% BSA
21112-3	MAB to Human IFN-Alpha-FITC labeled, Mouse IgG1 K, clone (MMHA-11)	< 1% BSA, 0.05 % Kathon CG/ICP
21116	MAB to Human IFN-Alpha, Mouse IgG1 K, neutralizing, clone (MMHA-13)	< 1% BSA
21118	MAB to Human IFN-Alpha, Mouse IgG1 K, neutralizing, clone (MMHA-17)	< 1% BSA
21125	MAB to Human IFN-Alpha, Mouse IgG1 K, neutralizing, clone (MMHA-6)	< 1% BSA
21127	MAB to Human IFN-Alpha, Mouse IgG1 K, neutralizing, clone (MMHA-9)	< 1% BSA
21129	MAB to Human IFN-Alpha, Mouse IgG1 K, neutralizing, clone (MMHA-14)	< 1% BSA
21375	MAB to Hu-IFN-Alpha/Beta R1 (IFNAR1), Mouse IgG1, neutralizing, (MMHAR-1)	None
21385	MAB to Hu-IFN-Alpha/Beta R2 (IFNAR2), Mouse IgG2A, neutralizing, (MMHAR-2)	< 1% BSA
21385-3	MAB to Hu-IFN-Alpha/Beta R2-PE-labeled, Mouse IgG2A, clone (MMHAR-2)	1.5% BSA, 0.1 % Kathon CG/ICP
21386-3	MAB to Hu-Interferon-Alpha/Beta R2 (IFNAR2)-FITC labeled, Mouse IgG2a	< 1% BSA, 0.05 % Kathon CG/ICP
21395	MAB to Human IFN-Omega, Mouse IgG1, neutralizing, clone (OMG-4)	None
21400-1	MAB to Human IFN-Beta, Mouse IgG1 kappa, neutralizing, clone (MMHB-3)	< 1% BSA



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Product Number	Product Name	Composition
21400-3	MAB to Hu-IFN-Beta-FITC labeled, Mouse IgG1 kappa, clone (MMHB-3)	< 1% BSA, 0.05 % Kathon CG/ICP
21405	MAB to Human IFN-Beta , Mouse IgG2A kappa, neutralizing, clone (MMHB-1)	< 1% BSA
21410	MAB to Hu-IFN-Beta, Mouse IgG1, neutralizing, clone (MMHB-2)	None
21450	MAB to Human Interferon Beta, Mouse IgG1, neutralizing, clone (MMHB-12)	< 1% BSA
21455	MAB to Human Interferon Beta, Mouse IgG3, neutralizing, clone (MMHB-13)	< 1% BSA
21460	MAB to Human Interferon Beta, Mouse IgG2B, neutralizing, clone (MMHB-14)	< 1% BSA
21465	MAB to Human Interferon Beta, Mouse IgG2A, neutralizing, clone (MMHB-15)	< 1% BSA
21470	MAB to Human Interferon Beta, Mouse IgG1, neutralizing, clone (MMHB-16)	< 1% BSA
21500	MAB to Human Interferon Gamma, Mouse IgG1, neutralizing, clone (MMHG-1)	< 1% BSA
21501-3	MAB to Hu-Interferon-Gamma FITC labeled, Mouse IgG1	< 1% BSA, 0.05 % Kathon CG/ICP
21550	MAB to Human Interferon Gamma, Mouse IgG1, non-neutralizing, clone (MMHG-2)	< 1% BSA
21580	MAB to Human Interferon Gamma RC1, Mouse IgG1, neutralizing, clone (MMHGR-1)	< 1% BSA
21585	MAB to Human Interferon Gamma RC1, Mouse IgG1 non-neutralizing, (MMHGR-2)	< 1% BSA
21586	MAB to Hu-IFN-Gamma RC2, Mouse IgG1, non-neutralizing, clone (MMHGR-10)	None
21808	MAB to Human-IL-1-R1, Rat IgG2A, neutralizing, clone (RMH1R-1)	None
21809	MAB to Human-IL-1-R1, Rat IgG2A, non-neutralizing, clone (RMH1R-2)	< 1% BSA
22100-1	MAB to Mouse Interferon Alpha, Rat IgG1 neutralizing, clone (RMMA-1)	None
22100-3	MAB to Mouse Interferon Alpha-FITC labeled, Rat IgG, clone (RMMA-1)	< 1% BSA, 0.05 % Kathon CG/ICP
22400-1	MAB to Mouse Interferon Beta, Rat IgG, neutralizing, clone (RMMB-1)	< 1% BSA
22400-3	MAB to Mouse Interferon Beta-FITC labeled, Rat IgG, clone (RMMB-1)	< 1% BSA, 0.05 % Kathon CG/ICP
22500	MAB to Mouse Interferon Gamma, Rat IgG1 gamma, neutralizing, clone (RMMG-1)	< 1% BSA
22501-3	MAB to Mouse Interferon Gamma FITC labeled, Rat IgG1 gamma	< 1% BSA, 0.05 % Kathon CG/ICP
22580	MAB to Mouse Interferon Gamma RC1, Rat, non-neutralizing, clone (RMMGR-1)	< 1% BSA
22700	MAB to Mouse B7-1 (CD80) Protein, Rat IgG2A kappa, clone (RMMP-1)	< 1% BSA
22701-3	MAB to Mouse B7-1 [CD80] FITC labeled Protein, Rat IgG2a kappa	< 1% BSA , 0.05% Kathon
22702-3	MAB to Mouse B7-1 [CD80] PE labeled Protein, Rat IgG2a kappa	1.5% BSA, 0.1 % Kathon CG/ICP
22705	MAB to Mouse B7-1 (CD86) Protein, Rat IgG2A kappa, clone (RMMP-2)	< 1% BSA
22706-3	MAB to Mouse B7-1 (CD86) FITC labeled Protein, Rat IgG2A kappa, clone (RMMP-2)	< 1% BSA , 0.05% Kathon
22707-3	MAB to Mouse B7-1 (CD86) PE labeled Protein, Rat IgG2A kappa, clone (RMMP-2)	1.5% BSA, 0.1 % Kathon CG/ICP
22808	MAB to Mouse-IL-1-R1, Rat IgG1, neutralizing, clone (RMML1-1)	< 1% BSA
22809	MAB to Mouse-IL-1-R1, Rat IgG2A, neutralizing, clone (RMML1-2)	< 1% BSA
23500	MAB to Rat Interferon Gamma, Mouse IgG1 lambda, neutralizing, clone (DB-1)	None
23510	MAB to Rat Interferon Gamma, Mouse IgG1, neutralizing, clone (DB-13)	None
23515	MAB to Rat Interferon Gamma, Mouse IgG2A, neutralizing, clone (DB-14)	None
23520	MAB to Rat Interferon Gamma, Mouse IgG2A, non- neutralizing, clone (DB-10)	None
27100	MAB to Pig Interferon Gamma, Mouse IgG1, neutralizing, clone (K9)	None
27105	MAB to Pig Interferon Gamma, Mouse IgG1, neutralizing, clone (F17)	None
27500	MAB to Pig Interferon Gamma, Mouse IgG1, neutralizing, clone (G47)	None
27505	MAB to Pig Interferon Gamma, Mouse IgG1, neutralizing, clone (C5)	None
31100	PAB to Human Interferon Alpha, Sheep Serum, neutralizing	Neat Serum
31101	PAB to Human Interferon Alpha, Rabbit Serum, neutralizing	Neat Serum



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Product Number	Product Name	Composition
31130	PAb to Human Interferon Alpha, Rabbit Serum, neutralizing	Neat Serum
31375-1	PAb to Hu-Interferon-Alpha/Beta R1 (InterferonAR1), Goat IgG, non-neutralizing	None
31375-3	PAb to Hu-Interferon-Alpha/Beta R1 (InterferonAR1) Biotin labeled, Goat IgG	None
31385	PAb to Human Interferon Alpha/Beta R2 (IFNAR2), Rabbit Serum, non-neutralizing	Neat Serum
31400	PAb to Human Interferon Beta, Sheep Serum, neutralizing	Neat Serum
31410	PAb to Human Interferon Beta, Rabbit Serum, neutralizing	Neat Serum
31420-1	PAb to Human Interferon Beta, Goat IgG, affinity purified neutralizing	None
31420-3	PAb to Human Interferon Beta Biotin labeled, Goat IgG, affinity purified	None
31500	PAb to Human Interferon Gamma, Rabbit Serum	Neat Serum
31580	PAb to Human Interferon Gamma RC1, Rabbit Serum, non-neutralizing	Neat Serum
31585	PAb to Human Interferon Gamma RC2, Rabbit Serum, non-neutralizing	Neat Serum
31852	PAb to Human IL-10 RC2, Rabbit Serum, non-neutralizing	Neat Serum
32100	PAb to Mouse Interferon Alpha, Rabbit Serum, neutralizing	Neat Serum
32120	PAb to Mouse Interferon Alpha, Chicken IgY, purified, non-neutralizing	< 1% BSA
32400	PAb to Mouse Interferon Beta, Rabbit Serum, neutralizing	Neat Serum
32500	PAb to Mouse Interferon Gamma, Rabbit Serum	Neat Serum
32580	PAb to Mouse Interferon Gamma RC1, Rabbit Serum, non-neutralizing	Neat Serum
32585	PAb to Mouse Interferon Gamma RC2, Rabbit Serum, non-neutralizing	Neat Serum
33100	PAb to Rat Interferon Alpha, Rabbit IgG, protein A purified, neutralizing	None
33400	PAb to Rat Interferon Beta, Rabbit IgG, protein A purified, neutralizing	None
33405	PAb to Rat Interferon Beta, Rabbit IgG, ligand purified, neutralizing	None
33500	PAb to Rat Interferon Gamma, Protein A Purified Rabbit IgG, neutralizing	None
33505	PAb to Rat Interferon Gamma; Rabbit Ig, ligand purified, neutralizing	None
37100	PAb to Pig Interferon Alpha, Rabbit Serum, neutralizing	Neat Serum
37500	PAb to Pig Interferon Gamma, Rabbit Serum	Neat Serum

Section 2: Composition / Information on Ingredient

1) Kathon CG/ICP

- Ingredients: 5-Chloro-2-Methyl-4-Isothiazolin-3-One, 2-Methyl-4-Isothiazolin-3-One, Magnesium Chloride anhydrous, Magnesium Nitrate, Copper Nitrate Trihydrate, water
- CAS Number: 26172-55-4, 2682-20-4, 7786-30-3, 10377-60-3, 10031-43-3
- EC Number: 247-761-7 (Kathon CG/ICP)
- Symbol: C
- R-Phrases: R 34, 43

2) Bovine Serum Albumin (BSA) and Rat Serum Albumin (RSA)

- Ingredient: Serum Albumin
- CAS Number: 9048-46-8
- EC Number: 232-936-2



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Section 2: Composition / Information on Ingredient continued

- R-pharse: No information required.

3) Neat Serum and IgG

- CAS Number: N/A
- EC Number: N/A
- R-pharse: No information required.
- Note: The serum derived products, to the best of the supplier's knowledge, were collected from animals that did not show signs of List A* (OIE) diseases and were not vaccinated against the diseases of List A (OIE).
www.oie.int/eng/maladies/en_classification.htm
- The animals were tested negative for specific pathogens prior to bleed.

Section 3: Hazards Identification

Emergency Overview

1) Kathon CG/ICP

Note: The following information pertains to pure Kathon CG/ICP. Information on toxicity at the supplied concentration of Kathon CG/ICP (< 0.2 % v/v) is unavailable.

- Corrosive
- Skin sensitizer
- May cause burns

2) BSA and RSA

- Mild irritants to the mucous membrane, and respiratory tract
- BSA can cause allergic reactions to users with an allergy to dairy products.

3) Neat Serum and IgG

- Universal protection measures are recommended.

Section 4: Symptoms and First Aid Measures

Symptoms:

- *Skin Contact:* Mild irritant to the skin and eyes upon overexposure
- *Ingestion:* May be hazardous upon ingestion causing nausea

First Aid Measures:

- *Ingestion / Oral exposure:* If the person is conscious wash mouth with water. If large quantity of any component is swallowed call a physician immediately. Loosen any tight clothing.
- *Inhalation:* If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms persist or reappear.
- *Skin Contact:* If large quantity of any component is in contact with the skin, wash with ample amounts of soap and water for at least 15 minutes. Cover the skin with an emollient. Get medical attention if irritation develops. Cold water may be used.



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Section 4: Symptoms and First Aid Measures continued

- *Eye Contact:* Check for and remove any contact lenses. Immediately flush eyes with ample amounts of water for at least 15 minutes. Cold water may be used. Get medical attention if irritation occurs.

Section 5: Fire Fighting Measures

- *Flammability of Product:* May be combustible at extreme temperatures.
- *Flash Points:* Not available for the provided concentrations.
- *Fire Hazards in presence of Various Substances:* Not available
- *Fire Fighting Media:* Small Fire: Use DRY chemical powder.
Large fire: Use water spray, fog or foam. Do not use water jet.
- *Protective Clothing (Fire):* Use an approved/certified respirator or equivalent. Use protective clothing to avoid contact with skin and eyes
- *Special Remarks on Fire Hazards:* Not available
- *Hazardous thermal decomposition products:* None

Section 6: Accidental Release Measures

- *Procedures of Personal Precautions:* Wear safety glasses, lab coat and use an approved certified respirator or equivalent. Must wear Gloves.
- *Small Spill and Leak:* Use appropriate tools to put the spilled solid in a waste disposal container. Finish cleaning by water on the contaminated surface and dispose of according to local and regional authority requirements.
- *Environmental Precautions and Clean-up Methods:* Use a shovel to put the material into a waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow the water to evacuate through the sanitary system.

Section 7: Handling and Storage

- *Handling:* Avoid contact with skin and eyes, and avoid ingestion.
- *Storage:* Refer to the storage temperatures indicated in the protocol. It is recommended to use original containers for storage.
- *Intended Use:* Refer to the protocol supplied for proper use. If questions arise please contact info@interferonsource.com
- *Packaging materials:* Use original containers.

Section 8: Exposure Controls/Personal Protection

- Engineering Controls
 - Safety Shower and Eye Wash
- Personal Protective Equipment
 - Body: Lab Coat
 - Hands: Gloves
 - Eyes: Safety Glasses (recommended)



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Section 8: Exposure Controls/Personal Protection continued

- Exposure Limits:
 - 1) Kathon CG/ICP
OSHA PEL- Not Established
ACGIH TLV- Not Established
 - 2) BSA and RSA
OSHA PEL- Not Established
ACGIH TLV- Not Established
 - 3) Neat Serum and IgG
OSHA PEL- Not Established
ACGIH TLV- Not Established

Section 9: Physical and Chemical Properties

- Physical State and Appearance: May be frozen or in liquid state depending on storage conditions.
- Dispersion properties: Not available
- Solubility: Not applicable
- Odor: Odorless
- Taste: Not available
- Color: Colorless. The color may change with change in pH.

Section 10: Stability and Reactivity

- Stability and Reactivity: The product is stable.
- Conditions to Avoid: Extreme temperatures.
- Materials to Avoid: None
- Hazardous Decomposition Products: BSA: Toxic Fumes
- Hazardous Polymerization: Will not occur

Section 11: Toxicological Information

1) Kathon CG/ICP

This information is based on data on pure Kathon CG/ICP. At the supplied concentration Kathon CG/ICP (< 0.2 % v/v), the toxicological information has not been established.

LD50	Rat	Rabbit
Oral:	75 mg/kg	-----
Skin:	-----	>5000 mg/kg

Chronic effects on Humans: None known

Other toxic effects on Humans: Causes burns in the eye, skin and is extremely destructive to the mucous membrane of the upper respiratory tract.

Special remarks on Chronic Effects on Humans: None

Special remarks on Other Toxic effects on Humans: Inhalation may result in spasm, inflammation, and edema. Symptoms: burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting.

Special remarks on toxicity to Animals: Not available



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Section 11: Toxicological Information continued

- 2) BSA and RSA
LD50: Not available
Chronic effects on Humans: None known
Other toxic effects on Humans: Possible mild irritant to eyes, mucous membrane and respiratory track.
Special Remarks on Chronic Effects on Humans: None
Special remarks on toxicity to Animals: Not available
Special Remarks on other Toxic Effects on Humans: **BSA may be an allergen to users with an allergy to dairy products. Handle the product with appropriate personal protection gear if there is a known allergy to dairy products.**
- 3) Neat Serum and IgG
Not Applicable. It is recommended to observe universal precautions while handling serum based products.

Section 12: Ecological Information

- No information available

Section 13: Disposal Considerations

- For all materials waste must be disposed according to federal, state and local environment control regulations.

Section 14: Transport Information

- DOT Proper Shipping Name: None
- The kit is transported as Non-Hazardous.

Section 15: Regulatory Information

Label Requirements

- Europe: Product not classified according to EU regulations.
- USA:
HCS Classification: Product not classified under HCS.

US Federal Regulations

SARA 302/304/311/312 extremely hazardous substances: No products found

SARA 302/304 emergency planning and notification: No products found

SARA 302/304/311/312 hazardous chemicals: Kathon CG/ICP

SARA 311/312 MSDS distribution-chemical inventory-hazard identification: Kathon CG/ICP: corrosive.

TSCA 8 (b) inventory: Kathon CG/ICP

Clean Water Act (CWA) 307: No products found

Clean Water Act (CWA) 311: No products found

Clean Air Act (CAA) 112 accidental release prevention: None

Clean Air Act (CAA) 112 regulated flammable substances: None

Clean Air Act (CAA) 112 regulated toxic substances: None

The product is not controlled under WHIMS (Canada)



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Section 15: Regulatory Information continued

International Regulations

CEPA DSL: No products

EINECS: Not available

DSCL (EEC): Not classified

Australia (NICNAS): No products

Philippines (RA6969): No products

Germany Water class: No products

VCI WGK: No products

Korea (TCCCL): No products

State Regulations

New Jersey Right to Know Components: Kathon CG/ICP

Pennsylvania Right to Know Components: Kathon CG/ICP

California Prop.65: No ingredients found.

Section 16: Other Information

Disclaimer: For R & D use only. Not for drug, household or other uses.

Warranty: The above information is correct to the best of our knowledge. This information is not guaranteed to be all inclusive. The user should handle all materials with care using the MSDS as a guideline only. PBL Biomedical Laboratories shall not be held responsible for any damage resulting from handling or from contact with the above product.