Name:	**Heat Inactivated Normal Human Serum**
Catalog Number:	**HI-NHS**
Sizes Available:	0.5 mL/vial
Concentration:	>55 mg protein/mL (see Certificate of Analysis for actual conc.)
Form:	Frozen liquid
Activity:	>90% active classical pathway >90% active alternative pathway Lot specific titers provided in the Certificate of Analysis
Buffer:	None
Preservative:	None, 0.22 µm filtered. Not certified as sterile.
Storage:	-70°C or below. Minimize freeze/thaw cycles.
Source:	Normal human blood (shown by certified tests to be negative for HBsAg and for antibodies to HCV, HIV-1 and HIV-II).
Precautions:	Use normal precautions for handling human blood products.
Origin:	Manufactured in the USA.

General Description

Heat inactivated normal human serum (HI-NHS) exhibits no complement activity via the classical and alternative pathways (CH50 and AP50). Normal human serum (neat NHS) tested for complement activity and certified to possess fully functional classical and alternative pathways of complement was used as the starting material to make HI-NHS. NHS was prepared from a large number of donors. Each unit of blood was collected without anticoagulants and each was individually tested for transfusion-transmissible diseases before pooling (see **Precautions/Toxicity/Hazards** below**)**. After coagulation, the liquid portion was separated by centrifugation. The different units were pooled, filtered through a 0.22 µm filter and tested for complement activity via the classical and alternative pathways. The complement active NHS was then subjected to inactivation at 56°C for 30 minutes, filtered through a 0.22 µm filter, aliqoted and frozen at -80°C.

All testing for complement activity was performed on the subsequently thawed samples to guarantee that the functional activity reported is what customers will receive when the samples are thawed.

Physical Characteristics

HI-NHS is a clear, straw-colored liquid containing all proteins of normal human serum. Although the NHS is filtered through 0.22 µm sterile filters and is aliquoted into sterile containers, it is not packed under strictly sterile conditions and is therefore not certified as sterile.

Function

HI-NHS is tested for classical pathway hemolytic activity using antibody-sensitized sheep erythrocytes (CompTech #B200) and for alternative pathway function using rabbit erythrocytes (CompTech #B300). The Certificate of Analysis provided with each lot gives a description of the assays and specific titers for the sera compared to a normal human serum standard.

Assays

The unit of classical pathway activity is the CH50. One CH50 unit is defined as the input of NHS complement standard yielding 50% lysis of $1x10^8$ EA (CompTech #B200) when incubated for 60 minutes at 37°C in a total reaction volume of 1.5 mL GVB++.

The unit of alternative pathway activity is the AP50. One AP50 unit is defined as the input of NHS complement standard yielding 50% lysis of $1.5x10^7$ rabbit erythrocytes (Er, CompTech #B300) when incubated for 30 minutes at 37°C in a total reaction volume of 100 µL GVB° containing a final Mg-EGTA concentration of 10 mM.

Applications

The HI-NHS has been pre-tested and certified to exhibit no functional activity via the classical and alternative pathways of the complement system. HI-NHS can be used as a source of serum in assays to avoid interference from the complement system.

Precautions/Toxicity/Hazards

The source is human blood, therefore precautions appropriate for handling any blood-derived product must be used even though the source was shown by certified tests to be negative for HBsAg and for antibodies to HCV, HCV-NAT, STS, and HIV-1 and HIV-II.

Hazard Code: B

MSDS is available upon request.

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NOT FOR HUMAN OR DRUG USE.

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