

# ANIARA

Manufactured By: HYPHEN BioMed



## HUMAN BIOCHEMICALS

Proteins and Enzymes proposed by HYPHEN BioMed are prepared with highly resolutive purification techniques. They offer a high purity grade, a high specific activity and an excellent stability.

Proteins are extracted from first grade biological material (human or bovine plasma, platelet concentrates), which is specifically selected for these preparations. The material is tested in order to offer the required viral safety. These products are presented in the freeze-dried form. Enzymes are then specifically activated and stabilised through well controlled processes.

All these biochemicals are particularly useful for all research protocols, for quality control procedures and for developing specific functional assays.

According to your needs and the amounts ordered, we can specifically prepare proteins and enzymes according to your specifications. We can also use the excipients required for your specific applications in the lyophilisation process.

Should you need a specific protein or enzyme, bulk quantities, or a special formulation?

**Contact us!**

**We will do our best for meeting your needs.**

Form AH36  
2-2010

## Purified Human Proteins

They are extracted from non-activated citrated human plasma, which is only used for these preparations. Proteins are purified with non-denaturing methods, which allow keeping the structure and the biological activity of the native molecule. Usually proteins are lyophilised in presence of glycine, hepes and sodium chloride. Some preparations are lyophilised with excipients, which do not contain amino groups. This allows using directly the reconstituted products for covalent coupling. Each protein is packaged with its specification sheet, which includes an analysis certificate, indicating the protein content (Lowry method and absorbance at 280 nm) and the specific activity.

***Viral safety:*** *The material used for protein preparation is tested with registered methods and found negative for HIV (1 and 2) antibodies, HBs Ag and HVC antibodies. However, no assay may warrant the total absence of infectious agents. Any product of human origin must then be handled with all the required cautions, as being potentially infectious.*

## Vitamin K Dependent Factors

All the vitamin K dependent factors are extracted from fresh frozen and thawed human citrated plasma with the following procedure: adsorption-elution on baryum citrate; ammonium sulfate salt fractionation; combination of ion exchange, affinity and gel filtration chromatographies.

The final preparation is very homogeneous and keeps the full activity of the native protein. All purification steps are performed with great care and using specific cautions, in order to avoid any activation during the process. No inhibitory activity is present in the final product, which is then stabilised and lyophilised.

## Purified Human Enzymes

They are prepared through the specific activation of purified human proteins. Enzymes are highly homogeneous and do not contain any exogeneous product used for activation (use of solid phase activation, or specific purification following activation).

Enzymes are then stabilised and lyophilised in presence of the adequate excipients. Following reconstitution, these enzymes

present a well characterised activity and a high stability which make them suitable for most of the in-vitro biological protocols.

***Viral safety: The material used for protein preparation is tested with registered methods and found negative for HIV (1 and 2) antibodies, HBs Ag and HVC antibodies. However, no assay may warrant the total absence of infectious agents. Any product of human origin must then be handled with all the required cautions, as being potentially infectious.***