BIOThERAPY

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BIBLIOGRAPHY


TRANSPLANT

Organ preservation

SCOT Solutions
**ORGAN PRESERVATION: THE SOLUTIONS**

- MacoPharma strives to develop new technologies, medical devices and preservation solutions in order to support innovative developments in organ transplantation and to increase graft preservation (during both transport and preservation).
- Our research is carried out in partnership with academic working teams.

**DESCRIPTION**

**SCOT 15 Multiple Abdominal Organ solution**
Solution for hypothermic perfusion and preservation of organs (kidney, liver, pancreas)

**SCOT 30 Vascular Grafts**
Solution for vascular grafts preservation and cryopreservation (-80°C or -150°C)

**SIMPLICITY**

- Solutions ready to use.
- Easy to store at room temperature (between +2°C and +25°C)*.
- Ergonomics and conditioning adapted to simple use in the surgery theatre by the transplantation team.
- The normopotassic formula enables transplantation without graft rinsing.
- Optimisation of the organ harvesting and preservation.

*The solution must be stored for at least 24 hours at a temperature ranging from +3°C and +5°C prior to use. The solution should be removed from the refrigerator just before use.

**APPLICATIONS**

- In situ and ex situ static infusion of abdominal grafts.
- Hypothermic preservation of grafts.
- Collection, transport and preservation of abdominal organs (liver, kidney, pancreas).
- Transport (+4°C) and cryopreservation (-80°C or -150°C) of vascular grafts.

**Particular precautions**

- Many cases, do not administer SCOT to the patient for therapeutic use.
- This is not a cardioplegic solution.

**SECURITY**

- The quality of the products is guaranteed by:
  - our certified pharmaceutical Good Manufacturing Practices (GMP) for each production step,
  - The Marketing authorisation PTA*,
  - Our internal quality assurance system.
  *Additional Therapeutic Products.

**EFFICACY**

- The ionic composition of the extra cellular type solution with a low potassium concentration\(^1,2\):
  - Slows ATP loss and pH reduction.
  - Decreases cellular depolarisation.
  - Avoids acute vasoconstriction.

- Stable solution with a high molecular weight polyethylene glycol (PEG 20 kDa)\(^1,2,6\):
  - Water-soluble polymer, non-toxic and biocompatible;
  - Preserves the structure and function of cells during ischemia-reinfusion\(^4,5\);
  - Exerts oncotic pressure, limiting tissue oedema during preservation of abdominal organs and during re-infusion\(^8\);
  - Protects the extracellular matrix during transport and cryopreservation of vascular grafts;
  - Reduces immunogenicity of the graft by non-pharmacological masking of antigenic sites on the cell membrane (immunomasking effect)\(^4,5\), reducing the phenomenon of post-transplant rejection;
  - Cryoprotecting effect;
  - Extends allograft survival\(^7\).

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