

OptiPrep™ Mini-Review MC10

Hepatic non-parenchymal cells: Kupffer cells, sinusoidal endothelial cells (and other liver cell types) – a bibliography

- ◆ This Mini-Review provides a complete bibliography of publications that report the use of OptiPrep™ for the purification of all hepatic non-parenchymal cells (NPC) **other than stellate cells**.
- ◆ The only NPCs that can be isolated at sufficiently high purity, using solely density gradient centrifugation, are **stellate cells**. These cells (the least dense of the liver cells) are commonly isolated in simple iodixanol flotation gradients (see **Application Sheet C33**).
- ◆ Very often a total NPC fraction is prepared using an iodixanol barrier or discontinuous gradient (see **Application Sheet C24**) and the NPCs then analyzed by flow cytometry without any further gradient fractionation. Kupffer cells and sinusoidal endothelial cells may be analyzed in this manner.
- ◆ **Kupffer or sinusoidal endothelial** may also be resolved using a secondary technique involving (1) the use of an antibody (usually bound to magnetic beads), (2) elutriation or (3) selective adherence of Kupffer cells to a collagen-coated plastic substratum.
- ◆ There are also a few published papers reporting the resolution of Kupffer cells using only an iodixanol density gradient (see **Section 5 and Application Sheet C47**).
- ◆ Epithelial cells, leukocytes, macrophages, NK cells and oval (progenitor) cells are also listed in this Mini-Review.
- ◆ The vast majority of research work has been carried out with rodent cells, but the methodology has been shown to be satisfactory for both human and porcine liver
- ◆ There are two companion Mini-Reviews: **MC08** (a brief methodological survey) and **MC09** which provides a bibliography of all **stellate cell** papers

Reference list important note

- ◆ To avoid excessive duplication, the references on both endothelial and Kupffer cells are listed under **Non-parenchymal cells** and are divided alphabetically according to **Research Topic**.

1. Dendritic cells (DCs)

These cells are often derived from liver NPC by immunomagnetic selection, but at least partial enrichment of DCs may also be obtained by iodixanol gradient fractionation. Cells expressed from the culture of partially disaggregated liver cells may also yield DCs that can be further purified in iodixanol gradients. See **Mini-Review MC08** for more details.

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Francisella tularensis LVS infection

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