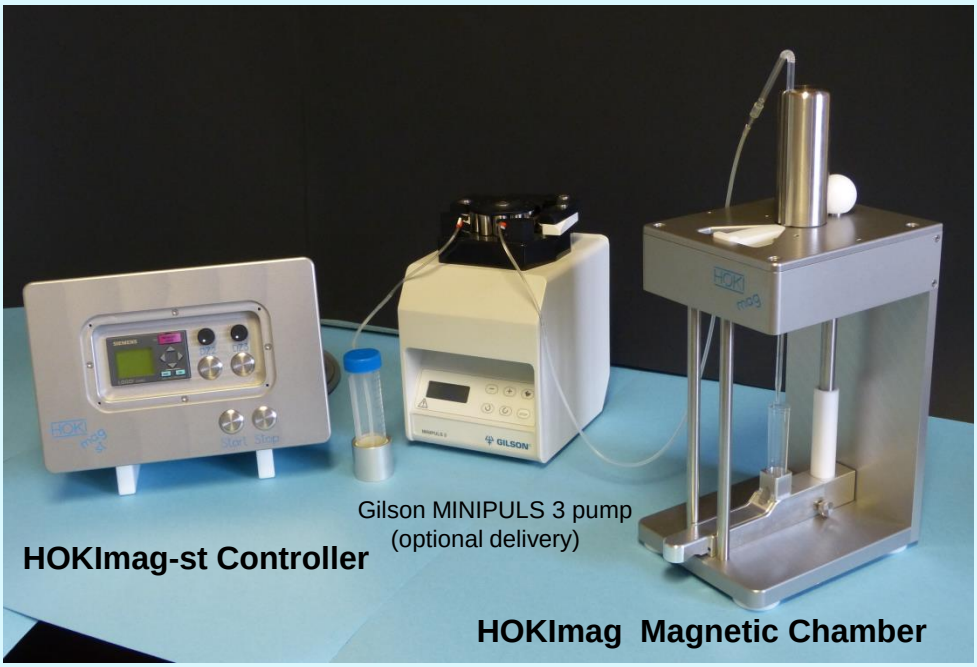
HOKImag

High-Gradient Magnetic Separation System



HOKImag: Free-flow magnetic separation system with a high-gradient 3-Tesla permanent magnetic field. The disposable flow columns do not contain ferromagnetic materials inside, the focussing gradient of the magnetic field is provided from outside the columns by a patented device.

HOKImag-st: Programmable pump-controller for automatic loading, incubation and washing of the samples in the magnetic field.

Applications: immunomagnetic separation of biological materials like organelles, receptosomes, phagosomes, and protein-protein complexes labeled with small nanoparticles (e.g. 50 nm), as well as for isolation of exosomes and of cell populations.

Advantages:

- no clotting of the columns with biological materials or air bubbles
- the strong magnetic field allows the use of very small magnetic particles
- minimal contaminations based on the small internal surface of the columns
- reduced sample volume by compression of the column after separation, no centrifugation step required
- automatization by the optional programmable pump controller **HOKImag-st**.

Price on demand

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References to the applications with HOKImag:

Methods (Protocols):

Tchikov et al. (2014). Separation of magnetically isolated TNF-receptosomes from mitochondria. **Meth. Enzymol.**, 535, Endosome Signaling Part B, 327-349

Steinhäuser et al., (2014) Immunomagnetic isolation of mycobacteria-containing phagosomes and apoptotic blebs from primary macrophages. **Curr. Protocols Immunol**., 105:14.36.1-14.36.26

Tchikov et al. (2010) Immunomagnetic isolation of subcellular compartments. **Meth. Microbiol.** 37, 21-34

Steinhäuser, et al., (2013). Lipid-labeling facilitates a novel magnetic isolation procedure to characterize of pathogen-containing phagosomes. **Traffic**, 14, 321-336

Schütze and Tchikov (2008) Immunomagnetic isolation of TNF-receptosomes. **Meth. Enzymol.** 442, Programmed Cell Death, Part A, 101-123

Original Publications (Applications):

Stephan et al., (2017) Biphasic activation of acid sphingomyelinase by CD95 Ligand stimulation. **Oncotarget**, 2017, Mar 21;8(12):20067-20085. doi: 10.18632/oncotarget.15379.

Reiling et al., (2017) Shaping the niche in macrophages: Genetic diversity of the M. tuberculosis complex and its consequences of the infected host. **Int. J. Med. Microbiol**, 2017 Sep 14. pii: S1438-4221(17)30294-1. doi: 10.1016/j.ijmm.2017.09.009. [Epub ahead of print]

Fritsch et al., (2014) Cell-fate decisions to TNF regulated by K63 ubiquitination of TNF-receptor 1. **Mol. Cell. Biol. 34** (17), 3214-3228

Edelmann et al. (2011) Caspase-8 and caspase-7 sequentially mediate proteolytic activation of acid sphingomyelinase in TNF-R1-receptosomes. **EMBO-J.** 30. 379-394

Philipp et al. (2010) The polycomb group protein EED couples TNF-receptor 1 to neutral sphingomyelinase. **Proc. Natl. Acad. Sci.** 107, 1112-1117

Yazdanpanah et al. (2009) Riboflavin kinase couples TNF Receptor 1 to NADPH oxidase. **Nature** 460, 1159-1163

Schütze et al. (2009) Regulation of TNF-R1 and CD95 signalling by receptor compartmentalization. **Nat. Rev. Mol. Cell Biol.** 9, 655-662

Liao et al. (2008) CARP-2 is an endosomal ubiquitin protein ligase for RIP and regulates TNF-induced NF-kB activation. **Curr. Biol.** 18, 641-649

Feig et al. (2007). Palmitoylation of CD95 facilitates formation of SDS-stable receptor aggregates that initiate apoptosis signaling. **EMBO J.** 26:221-231

Lee et al. (2006) The role of receptor internalization in CD95 signaling. **EMBO-J.** 25:1009-1023

Schneider-Brachert et al. (2006) Inhibition of TNF receptor 1 internalization by adenovirus 14.7K as a novel immune escape mechanism. **J. Clin. Invest.** 116: 2901-2913

Schneider-Brachert et al.(2004) Compartmentalization of TNF Receptor-1 Signaling: Internalized TNF Receptosomes as Death Signaling Vesicles. **Immunity** 21, 415-428