DIRECT PROTEIN TRANSFER INTO CELLS & OOCYTES

Q: What is this?
A: This is a new technique to directly, simultaneously, reproducibly, and rapidly transfer protein molecules into many cells and oocytes by BAEKON Transfer System.

Q: What kinds of protein have you tried to transfer with this technique and what are their molecular weights?
A: So far, we have tried many proteins including antibodies, structural proteins, regulatory factors, and enzymes. Their MW ranges from 20–160 kD.

Q: Are the proteins active/functional inside the recipient cells?
A: Yes, they are fully functional. For structural proteins, they can be assimilated as cellular components; for enzymes, they retain enzymatic activities; for antibodies, they inhibit respective cellular processes.

Q: What are the recipient cells?
A: Culture cell lines, e.g., 3T3, PC-12; primary culture; human, mouse, fish, Xenopus, sea urchin, and Drosophila oocytes.

Q: What percentage of the cells get transferred?
A: Greater than 95%.

Q: Are the recipient cells viable?
A: Yes, viability is greater than 95%.

Q: Can post-transferred oocytes and embryos develop normally?
A: Yes.

Q: What can I do with this technique?
A: A lot: to study the function and localization of a gene product, and to regulate gene expression by transferring specific gene products, regulatory factors, enzymes, or antibodies into cells. Imagine…!

Q: What instrument have you been using for the transfer experiments?
A: BAEKON 2000. If you want to know more about this instrument and the whole scope of application, protocols, as well as experimental details, please contact BAEKON.

BAEKON, INC.
18866 ALLENDALE AVENUE SARATOGA, CA 95070 U.S.A.

Phone: (408) 741-0404 Telex: 362943 backon ud FAX: (408) 741-0944

*This instrument has successfully been used to transfer genes into mammalian cells (T- & B-lymphocytes, hepatocytes, fibroblasts, kidney & neural cells, etc.), fish oocytes, plant cells (monocot & dicot, both intact cells and protoplasts) yeast, Streptomyces sp., and bacterial cells (Gram positive & negative). It also has been used to induce cell fusion among mammalian, fish, plant, and bacterial cells.
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