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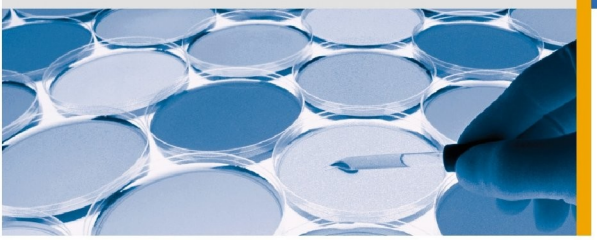
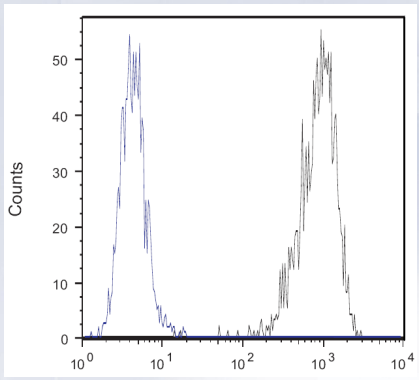


Licensing Opportunity

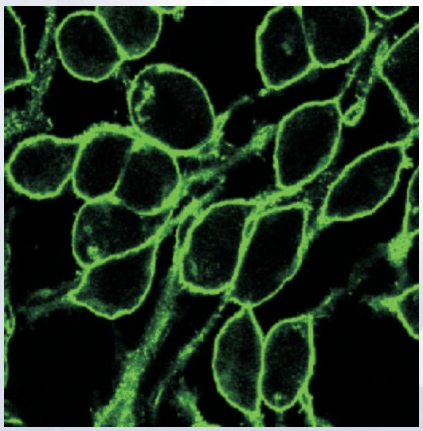
GPCR-expressing RBL-Cell Lines

Staining of cell surface C5aR by flow cytometry and LSM
Blue: untransfected RBL-2H3 cells
Black: RBL-C5aR

C5aR stained with anti-C5aR mAb S5/1 and goat-anti-mouse-FITC



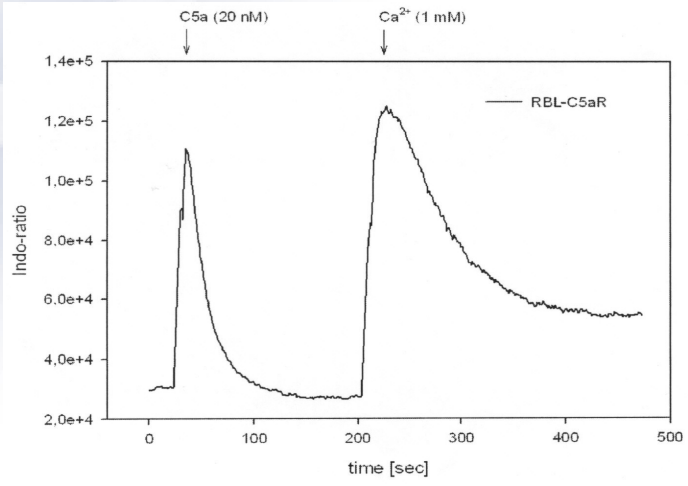
Mean channel of fluorescence



Laser microscopy image

Reference: Langkabel et al. Eur. J. Immunol. 1999 29:3035

Scientists of the University of Göttingen developed many different **transfectant** RBL-celllines which are overexpressing different **Chemokine receptors** like **CCR5, C5aR, C3aR, CCR2b, CXCR1,2** and **4** as well as **rat C5aR** and **C3aR**. Chemokines are are potent activators and **chemoattractants** for leukocyte subpopulations and some non-haemopoietic cells. Their actions are mediated by a family of 7-transmembrane **G-protein-coupled receptors**, the size of which has grown considerably in recent years and now includes 19 members. Chemokine receptors have also recently been implicated in several **disease states** including **allergy, psoriasis, atherosclerosis,** and **malaria.** However, most fascinating has been the observation that some of these receptors are used by **human immunodeficiency virus type 1 (HIV1)** in gaining entry into permissive cells. The two most common **HIV co-receptors** are **CXCR4**, used to infect T-lymphocytes, and **CCR5**, used to infect macrophages. These RBL-cell lines can be used for many different functional assays like **Calcium mobilization, Glucosaminidase release, MAP Kinase activation** and **Chemotaxis**.



C5a-induced intracellular calcium mobilization
AdBack-measurements: base-line for 25 sec in the absence of extracellular calcium
+20nM C5a (25 sec – 325 sec)
+1 mM Ca^{2+} (325 sec – 480 sec)

signo Hochschulen
Schutz von Ideen für die gewerbliche Nutzung
Ein Programm des Bundesministeriums für Wirtschaft und Technologie

Niedersachsen

MBM ScienceBridge GmbH

Hans-Adolf-Krebs-Weg 1
37077 Göttingen, Germany

www.sciencebridge.de

Product Manager
Dipl.-Biol. Christiane Bolli

tel.: +49 (0) 551 30724 156
fax: +49 (0) 551 30724 155
e-mail: cbolli@sciencebridge.de

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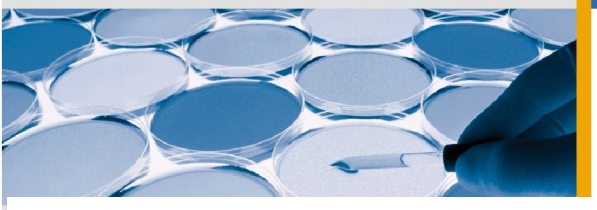

Licensing Opportunity

GPCR-expressing RBL-Cell Lines

Name of the Cell Line	Target Membrane Protein	Description of the Membrane Protein	Tag (N-terminal)	Functional assays	Reference
RBL-CCR5	human CCR5 (CD195)	Chemokine receptor HIV-Coreceptor	FLAG	Chemotaxis, Calcium mobilization, Glucosaminidase release, MAP Kinase activation, …	Oppermann et al. *J Biol Chem 274:*8875 (1999)
RBL-CCR2b	human CCR2b	Chemokine receptor	FLAG	Calcium mobilization, Glucosaminidase release	
RBL-CXCR1	human CXCR1	Chemokine receptor	FLAG	Chemotaxis, Calcium mobilization, Glucosaminidase release	
RBL-CXCR2	human CXCR2	Chemokine receptor	FLAG	Chemotaxis, Calcium mobilization, Glucosaminidase release	
RBL-CCR5+C5aR	human CCR5 + human C5aR	Chemokine receptors	FLAG-CCR5 HA-C5aR	Chemotaxis, Calcium mobilization, Glucosaminidase release	Hüttenrauch et al. *J Biol Chem 280:*37503 (2005)
RBL-CCR5+CXCR1	human CCR5 + human CXCR1	Chemokine receptors	FLAG-CCR5 HA-CXCR1	Chemotaxis, Calcium mobilization, Glucosaminidase release	
RBL-CCR5+CXCR2	human CCR5 + human CXCR2	Chemokine receptors	FLAG-CCR5 HA-CXCR2	Chemotaxis, Calcium mobilization, Glucosaminidase release	
RBL-CCR5+CXCR4	human CCR5 + human CXCR4	Chemokine receptors	FLAG-CCR5 HA-CXCR4	Chemotaxis, Calcium mobilization, Glucosaminidase release	
RBL-C3aR	human C3aR	Chemotactic leukocyte receptor	FLAG	Chemotaxis, Calcium mobilization, Glucosaminidase release	Langkabel et al.:*Eur J Immunol* 29: 3035 (1999)
RBL-C5aR	human C5aR (CD88)	Chemotactic leukocyte receptor	FLAG	Chemotaxis, Calcium mobilization, Glucosaminidase release, MAP Kinase activation, …	Langkabel et al.:*Eur J Immunol* 29: 3035 (1999)
RBL-rC3aR	rat C3aR	Chemotactic leukocyte receptor	?	Calcium mobilization,	
RBL-rC5aR	rat C5aR	Chemotactic leukocyte receptor	?	Calcium mobilization,	
RBL-$AT_{1a}R$	Angiotensin Ia Receptor		HA	Calcium mobilization, MAP Kinase activation, …	Hüttenrauch et al. *J Biol Chem 280:*37503 (2005)

We are looking for companies, who are interested in licensing these cell lines for selling them to industrial and scientific institutions or for developing advanced diagnostic tests and therapeutic solutions.

MBM ScienceBridge GmbH
Hans-Adolf-Krebs-Weg 1
37077 Göttingen, Germany
www.sciencebridge.de

Product Manager
Dipl.-Biol. Christiane Bolli
tel.: +49 (0) 551 30724 156
fax: +49 (0) 551 30724 155
e-mail: cbolli@sciencebridge.de