# LEXSY eukaryotic protein expression system

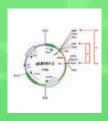




- ► Robust, fast-growing unicellular host
- ► Eukaryotic protein synthesis and modification
- Constitutive or inducible protein expression
- ► Yields of up to 300 mg/L of culture



### LEXSY is the proprietary expression system of Jena Bioscience based on the protozoan host Leishmania tarentolae.











**Expression** plasmid construction

Gene of interest

Transfection & selection

Reliable

**Expression** evaluation

Scale-up

**Protein** purification

Easy cloning in E. coli

electroporation protocols Versatile LEXSY shuttle Clonal or polyclonal selection Constitutive or inducible Intracellular or secretory

Fully adapted to common fermenta-tion technology

Up to 100 litres

One-step affinity purification

Conventional techniques

1 week

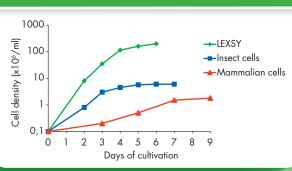
2 weeks

1 week

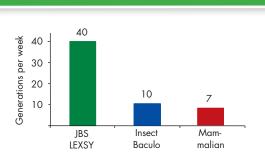
1 week

1 week

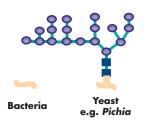
### **LEXSY** grows to higher densities than insect and mammalian cells

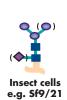


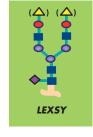
### LEXSY grows faster than insect and mammalian cells

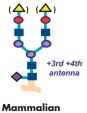


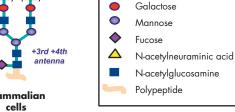
### **LEXSY performs mammalian-type glycosylation**











() partial modification

protein of interest Soluble active



# 

Constitutive

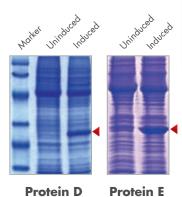
# Inducible

### Intracellular expression

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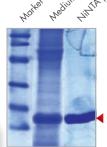


**Protein A**Two-step purification from lysed cells to purity > 95%



Up to 100-fold induction by addition of tetracycline

#### **Secretory expression**





Protein B Protein C

Protein of interest efficiently secreted to culture medium





Protein F Protein G

Upon induction protein of interest becomes major component of culture medium

▶ Protein of interest

### Directly contact our people for more detailed information



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Reinhard studied Biochemistry-Microbiology at the Moscow State Lomonossov University. After several years of work as a scientist at the pharmaceutical company JENAPHARM, Reinhard did his PhD thesis in expression of heterologous genes at the Institute for Microbiology and Experimental Therapy in Jena. He continued working in this field as scientist and group leader at the Institute for Molecular Biology at Friedrich-Schiller-University Jena. Reinhard joined Jena Bioscience in 1998 as project leader for the establishment and commercialization of the novel eukaryotic protein expression system "LEXSY".

Leishmania tarentolae



### Express your proteins with LEXSY

Licensing information: The commercial use of LEXSY requires a license from Jena Bioscience.

Academic and public institutions performing not-for-profit research may use the LEXSY systems without a license. For further information please contact us at: expression@jenabioscience.com

Product	Cat. No.	Amount	Price
LEXSY Expression Kits			
<b>LEXSYcon2 Expression Kit</b> for constitutive expression contains vector pLEXSY-sat2 or pLEXSY-neo2 or pLEXSY-hyg2 or pLEXSY-ble2	EGE-1300sat EGE-1300neo EGE-1300hyg EGE-1300ble	1 Kit	960 €
<b>LEXSinduce2 Expression Kit</b> for inducible expression contains vector pLEXSY_l-neo2 or pLEXSY_l-ble2	EGE-1400neo EGE-1300ble	1 Kit	2250 €
LEXSY Plating Kits			
<b>LEXSY Plating Kit comfort</b> components for solid medium, LEXSY BHI- and fetal-calf-serum-based with nitro-cellulose membranes, spatula, dishes & serological pipettes	ML-451	for 40 plates	800 €
LEXSY Plating Kit core components for solid medium, LEXSY BHI- and fetal-calf-serum-based without nitrocellulose membranes, spatula, dishes & serological pipettes	ML-452	for 40 plates	650 €
LEXSY Vectors			
pLEXSY-ble2 constitutive Expression Vector antibiotic selection of transfectants with LEXSY Bleo	EGE-231	5 µg	480 €
pLEXSY-hyg2 constitutive Expression Vector antibiotic selection of transfectants with LEXSY Hygro	EGE-232	5 µg	480 €
pLEXSY-neo2 constitutive Expression Vector antibiotic selection of transfectants with LEXSY Neo	EGE-233	5 µg	480 €
pLEXSY-sat2 constitutive Expression Vector antibiotic selection of transfectants with LEXSY NTC	EGE-234	5 µg	480 €
pLEXSY_I-ble2 inducible Expression Vector antibiotic selection of transfectants with LEXSY Bleo	EGE-241	5 µg	480 €
pLEXSY_I-neo2 inducible Expression Vector antibiotic selection of transfectants with LEXSY Neo	EGE-242	5 µg	480 €
Antibiotics			
LEXSY NTC	AB-101S	1 ml	40 €
sterile ready-to-go stock solution, 100 mg/ml	AB-101L	5 ml	160 €
LEXSY Bleo	AB103S	1 ml	80 €
sterile ready-to-go stock solution, 100 mg/ml	AB-103L	5 ml	320 €
LEXSY Hygro	AB-104S	1 ml	80 €
sterile ready-to-go stock solution, 100 mg/ml	AB-104L	5 ml	320 €
LEXSY Neo sterile ready-to-go stock solution, 50 mg/ml	AB-105S AB-105L	1 ml 5 ml	40 € 160 €
LEXSY Tet inducer	-		
sterile ready-to-go stock solution, 10 mg/ml,	AB-106S	1 ml	5 €
for inducible protein expression in LEXSY host T7-TR	AB-106L	10 ml	40 €

For LEXSY media & supplements, please view www.jenabioscience.com/LEXSY

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