



Mouse Genome Engineering Facility



Service Catalog 2022-23



Mouse Genome Engineering Facility

Cat#	Genome Editing Services	
MGEF 001	DNA Microinjection	*DNA microinjection for choice of client construct to embryos * Minimum 200-250 fertilized oocytes injected B6ND2F2 background Requirement from PI : *The construct provided by PI
MGEF 002	Random insertion Transgenic Model Package	*DNA microinjection including DNA plasmid, BAC, ect...) * Minimum 200-250 fertilized oocytes injected B6ND2F2 background * From transgene purification to founder genotyping- founders kept till 8 weeks of age max Requirement from PI : *The construct provided by PI
MGEF 003	Crispr Model Package#1 - [Knockout models]	*Simple KO Mouse models via Crispr/Cas pronuclear injection or electroporation- on B6N or B6ND2 zygote background. *Crispr/Cas9 targeting sgRNA design & purification, sgRNA efficiency tests & pronuclear injections / electroporation + founder genotyping *up to 3 selected founders kept for N1 (B6N) backcrossing & N1 genotyping *- N1 animals kept up to weaning MAX
MGEF 004	Crispr Model Package#2 : [Knock-In models, conditional Knockout, ROSA26 Knockin, Reporter-Knockin]	* for Mouse cKO or KI projects via Crispr/Cas pronuclear injection or 2cell injections- on B6ND2 zygote background *Crispr/Cas9 targeting sgRNA design & purification, sgRNA efficiency tests & pronuclear or 2cell injections, 2C-HDR microinjections, HDR KI insert purifications + founder genotyping *up to 3 selected founders kept for N1 (B6N) backcrossing & N1 genotyping *- N1 animals kept up to weaning MAX
MGEF 005	Construct Designing Services	Crispr strategy / target designing and consultation
MGEF 006	CRSIPR Guide Design	Crispr/sgRNA targeting strategy (KO) - Crispr guide design, guide cloning, sequenced checked and purification. (for a max of 3 guides per target, fees upto 3 guide)
MGEF 007	sgRNA amplification and purification	sgRNA amplification and purification sgRNA amplification and purification from Client verified & sequenced plasmid: sgRNA T7pcr+IVT+clean & nanodrop quantification (Fees per guide)
MGEF 008	CRISPR / gRNA efficiency test	Additional fee for Crispr / gRNA efficiency test directly with oocyte microinjection/ electroporation of gRNA + Cas9 -> individual blastocysts harvesting & PCR for gRNA targeting efficiency & T7 validation assays (estimated at up to 40 test samples per session)-
MGEF 009	DNA purification	Additional fee for final DNA purification step done at the facility (Fees per guide)
MGEF 010	DNA purification (BIOT PCR insert)	for BIOT PCR insert (Fees per insert)
MGEF 011	Founder genotyping	primer synthesis & regular transgenic insert PCR assay
MGEF 012	ES Cell Microinjection	B6 EScells microinjected in (B6J-Albino 8cell vitrified embryos) included: [2-3 microinjection sessions / maximum of 150 embryos/ blastocysts will be microinjected]. Founder KI PCR Genotyping- (founders kept till 8 weeks of age MAX) Requirement from PI : *The construct provided by PI

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Cat#	Genotyping Services	
MGEF 013	Genotyping package for rederivation	
Assisted Reproduction and Cryopreservation Services		
MGEF 014	Sperm cryopreservation	MAX 2-3 males per line will be cryopreserved . Motility of thawed sperm tested. (sperm donor animals provided by users) 10 years of LN2 for 10 straws/strain
MGEF 015	Embryo/Oocyte Cryopreservation	10 -15 females , Will cryo 200-300 embryos depending upon superovulation yield 10 years of LN2 for up to 4 vials per strain. [all animal donors provided by Client]
MGEF 016	Rederivation via Sperm cryorecovery / IVF / Embryo Transfer	Sperm cryorecovery, IVF , embryo transfer *Includes transfer of two-cell embryos to up to six recipient females INCLUDED: - IVF with B6 or B6ND2 Oocyte donors, - Embryo transfer - housing and maintenance till weaning.
MGEF 017	Rescue breeding Via IVF	If you are facing problem of extinction of your strain/line due to breeding cessation, mis-managmental practices or animal health issues. We can provide the rescue strain and established the colony for you
MGEF 018	Rescue breeding Via Oavrian Tranplantation	If you are facing problem of extinction of your strain/line due to breeding cessation, colony mis-management or animal health issues. We can provide the rescue strain and established the colony for you
MGEF 019	WT embryos/Unfertilized oocytes for InVitro studies	Vitrified / Fresh oocytes/embryos from max 3 superovulated WT females. (minimum 40-60 embryos per vial)
MGEF 020	Additional embryo Vial	Handling and Vitrification Processing fee per vial
MGEF 021	Sperm for InVitro studies	Cryopreserved or Fresh Sperm from 2 WT males
MGEF 022	Timed / staged WT post-implantation embryos	(for MEFs prep for example) Post-implantation embryos from 2-3 time pregnant WT females

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Cat#	Media, Kits and reagents for performing Assisted reproductive technologies services	
MGEF 023	KSOM Embryo culture media	
MGEF 024	M2 embryo handling media	
MGEF 025	IVF media Kit : mHTF, SPI (Sperm pre incubation media), GSH	
MGEF 026	Embryo/ Oocyte vitrification media kit: PBI, 1M DMSO, DAP213	
MGEF 027	Embryo/ Oocyte Recovery media kit: 0.25 M Sucrose -	
MGEF 028	Cryoprotectant for sperm cryo : gCPA	
MGEF 029	MGEF custom design Embryo Handling (EH) pipette KIT	
MGEF 030	MGEF custom design Embryo Transfer (ET) pipette KIT	(5 MGEF designed oviduct embryo transfer flame pulled and forged and calibrated pipettes + 1 silicon tubing + 1 silicon washer)
ACE2 mice model for COVID 19 research		
MGEF 031	Breeding and maintenance of Covid Model-Tg(K18-hACE2)Mgef/Blisc [TgPOS]	Breeding and maintenance of Covid Model-Tg(K18-hACE2)Mgef/Blisc [TgPOS] *Breeding, Maintenance and Care + genotyping of Tg(K18-hACE2)Mgef/Blisc [TgPOS] for animals up to 8 weeks of age MAX. *Additional housing and maintenance fees will apply beyond 8 weeks.
	Breeding and maintenance of Covid Model Control -Tg(K18-hACE2)Mgef/Blisc [TgNEG littermate control on B6N;DBA2 background]	Breeding and maintenance of Covid Model Control -Tg(K18-hACE2)Mgef/Blisc [TgNEG littermate control on B6N;DBA2 background] For animals up to 8 weeks of age MAX. Additional housing and maintenance fees will apply beyond 8 weeks.

Design

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