	Biological Resource Centre		Page 1 of 3
	BRC/IACUC/002	Appendix VIII- Standard procedures for Anaesthetic and Analgesic Use	11

Standard Procedures for Anaesthetic and Analgesic Use

Anesthetic Combinations:

Mice and Rats

- Ketamine/Xylazine
- Ketamine/Medetomidine
- Isoflurane (Can be used for induction and maintenance in rodents)

Reversal Agent:

- Atipamezole (To reverse Xylazine or Medetomidine in rodents)

Analgesics:

- Buprenorphine
- Meloxicam

Antibiotics:

- Enrofloxacin

Abbreviations:

IM- Intramuscular

IP- Intraperitoneal

IV- Intravenous

SC- Subcutaneous

Drug Dose Rates and Mode of Administration

Mice

ANAESTHETICS	DOSE RATE	ROUTE OF ADMINISTRATION
Ketamine	150mg/kg	IP
Xylazine	10mg/kg	
Ketamine	100mg/kg	
Xylazine	10mg/kg	
Ketamine	75mg/kg	IP
Medetomidine	1mg/kg	
Isoflurane	<i>Induction: 3-5% with oxygen: 1-2L/min</i>	Inhalation
	<i>Maintenance: 2-3% with oxygen: 1-1.5L/min</i>	


REVERSAL AGENT	DOSE RATE	ROUTE OF ADMINISTRATION
Atipamezole	0.1-1mg/kg	SC

ANALGESICS	DOSE RATE	ROUTE OF ADMINISTRATION
Buprenorphine	0.05-0.1mg/kg	SC, every 12 hours (Twice daily)
Meloxicam	1-2mg/kg	SC, every 24 hours (Once daily)

ANTIBIOTICS	DOSE RATE	ROUTE OF ADMINISTRATION
Enrofloxacin	5-20mg/kg	SC every 24 hours (Once daily)

Rats

ANAESTHETICS	DOSE RATE	ROUTE OF ADMINISTRATION
Ketamine	75mg/kg	Intraperitoneal
Xylazine	10mg/kg	
Ketamine	75mg/kg	Intraperitoneal
Medetomidine	0.5mg/kg	
Isoflurane	<i>Induction: 3-5% Maintenance: 2-3%</i>	Inhalation
	<i>Induction: 1-2L/min Maintenance: 1-1.5L/min</i>	
Oxygen Gas	<i>Induction: 1-2L/min Maintenance: 1-1.5L/min</i>	
	<i>Maintenance: 1-1.5L/min</i>	

 Agency for Science, Technology and Research SINGAPORE	Biological Resource Centre		Page 3 of 3
	BRC/IACUC/002	Appendix VIII- Standard procedures for Anaesthetic and Analgesic Use	11

REVERSAL AGENT	DOSE RATE	ROUTE OF ADMINISTRATION
Atipamezole	0.1 to 1mg/kg	SC

ANALGESICS	DOSE RATE	ROUTE OF ADMINISTRATION
Buprenorphine	0.01-0.05mg/kg	SC, IV every 12 hours (Twice daily)
Meloxicam	1-2mg/kg	SC, IP every 24 hours (Once daily)

ANTIBIOTICS	DOSE RATE	ROUTE OF ADMINISTRATION
Enrofloxacin	5-10mg/kg	SC every 12 hours (Twice daily)