

RAT STANDARD ANALGESICS AND ANESTHETICS

	Analgesic	Dose (mg/kg)	Route	Frequency of Administration	Notes
Opioids	Buprenorphine HCL*	0.05-0.1	SC/IP	6-8 hours	
	Buprenorphine ER* (ZooPharm)	1.2	SC	48 hours	Available in two concentrations 0.5 mg/ml (mice) and 1.0 mg/ml (rats). Do not dilute.
	Buprenorphine XR* (Ethiqa)	0.65	SC	48 hours	Once broached, the vial needs to be discarded at 56 days. Do not house on woodchip bedding.
NSAIDs	Meloxicam	1-2	SC	8-12 hours	
	Meloxicam ER (Zoopharm)	2-4	SC	72 hours	Do not dilute
	Carprofen	5	SC	24 hours	
Local	Bupivacaine	2.5	SC	4-8 hours	Dilute to 0.25%, Do not exceed 8 mg/kg
	ER Bupivacaine (Nocita)	1.0	SC	48-72 hours	Do not dilute

Multimodal Analgesia = Opioid + NSAID +/- Local

Anesthetic	Dose (mg/kg)	Route	Frequency of Administration	Notes
Isoflurane	3-5% for induction 1-3% for maintenance	Bell jar/ Drop box in fume hood	Continuous	Calculate 0.05mL Isoflurane for each 1% dose concentration (up to 5%) per 1 Liter chamber internal volume (see chart below).
Isoflurane	3-5% for induction 1-3% for maintenance	Vaporizer	Continuous	
Ketamine*/ Xylazine*	60-100 ket/ 5-10 xyl	IP	Initial loading dose, then 1/3-1/2 of loading dose of ketamine ONLY as needed to maintain (typically 30-45 min. intervals)	Cocktail, Redosing should be ketamine only
Ketamine*/ Xylazine*/ Acepromazine	30-40 ket/ 5-6 xyl/ 1 ace	IP	Initial loading dose., then 1/3-1/2 of loading dose of ketamine ONLY as needed to maintain (typically 30-45 min. intervals)	Cocktail, Redosing should be ketamine only
Ketamine*/ Dexmedetomidine (Dexdomitor)	75-90 ket/ 0.25-1.0 dexmed	IP	Initial loading dose, then 1/3-1/2 of loading dose of ketamine ONLY as needed to maintain (typically 30-45 min. intervals)	Cocktail, Redosing should be ketamine only
Pentobarbital	40-60 mg/kg	IP	Initial loading dose, then 1/4-1/3 of loading dose as needed to maintain (typically 30-45 min. intervals)	

*controlled substance

Internal volume of anesthetic chamber	Concentration of Isoflurane				
	1%	2%	3%	4%	5%
1 liter	0.05	0.10	0.15	0.20	0.26

Volumes are in mL and indicate the volume of isoflurane to be applied to a cotton swab or gauze in the bell jar/drop box. Isoflurane soaked swab cannot come in direct contact with the animal.