

Rat Anesthesia Cocktails¹

Ketamine/Xylazine Cocktails^{2,3}

Dose range: **Ketamine 40-80 mg/kg with Xylazine 5-8 mg/kg given IP**

Acepromazine (1-2mg/kg) is optional and will lengthen recovery time. Lower doses of ketamine should be used if acepromazine is added.

Rat Sample Recipe #1: Ket/Xyl at 50/7.5

	Drug stock concentration ¹ (mg/ml)	Volume used for cocktail	Volume of cocktail administered to rat	Dose administered to rat
Ketamine	100 mg/ml	2.0 ml	-	50 mg/kg
Xylazine	20 mg/ml	1.5 ml	-	7.5 mg/kg
Saline	Sterile, isotonic	0.5 ml	-	-
Combination Cocktail		4 ml total	0.10 ml / 100 g	-

Rat Sample Recipe #2: Ket/Xyl at 75/5

	Drug stock concentration ¹ (mg/ml)	Volume used for cocktail	Volume of cocktail administered to rat	Dose administered to rat
Ketamine	100 mg/ml	3.0 ml	-	75 mg/kg
Xylazine	20 mg/ml	1.0 ml	-	5 mg/kg
Combination Cocktail		4 ml total	0.10 ml / 100 g	-

Rat Sample Recipe #3: Ket/Xyl at 80/8

	Drug stock concentration ¹ (mg/ml)	Volume used for cocktail	Volume of cocktail administered to rat	Dose administered to rat
Ketamine	100 mg/ml	3.5 ml	-	80 mg/kg
Xylazine	20 mg/ml	1.7 ml	-	8 mg/kg
Saline	Sterile, isotonic	1.4 ml		
Combination Cocktail		6.6 ml total	0.15 ml / 100 g	-

Ketamine-Medetomidine (Domitor®) Cocktail^{4,5}

Recommended dose: **Ketamine 75 mg/kg** and **Medetomidine 0.5mg/kg** administered **IP**

Rat Sample Recipe for KETAMINE and MEDETOMIDINE

	Drug stock concentration ¹ (mg/ml)	Volume used for cocktail	Volume of cocktail administered to rat	Dose administered to rat
Ketamine	100 mg/ml	3.0 ml	-	75 mg/kg
Medetomidine	1.0 mg/ml	2.0 ml		0.5 mg/kg
Saline	Sterile, isotonic	1.0 ml		
Combination Cocktail		6.0 ml total	0.15 ml / 100 g	-

Ketamine-Dexmedetomidine (Dexdomitor®) Cocktail^{4,5}

Recommended dose: **Ketamine 75 mg/kg** and **Dexmedetomidine 0.5mg/kg** administered **IP**

Rat Sample recipe for KETAMINE and DEXMEDETOMIDINE

	Drug stock concentration ¹ (mg/ml)	Volume used for cocktail	Volume of cocktail administered to rat	Dose administered to rat
Ketamine	100 mg/ml	1.2 ml	-	75 mg/kg
<u>Dex</u> medetomidine	0.5 mg/ml	1.6 ml		0.5 mg/kg
Saline	Sterile, isotonic	1.2 ml		
Combination Cocktail		4.0 ml total	0.25 ml / 100g	-

¹ Compiled from ACLAM anesthesia text, lab animal formulary, and other sources.

² Check drug concentration on bottle. Start with the correct concentration.

Ketamine is packaged at 10, 50, or **100** mg/ml.

Xylazine may be purchased at either **20** mg/ml or 100 mg/ml.

³ Ket/Xyl cocktails should be redosed 1st time with ketamine only at ½ dose (mg/kg). If it is necessary to redose a 2nd time, use ½ dose of cocktail (ml/kg).

⁴ Medetomidine (Domitor) concentration is 1.0 mg/ml, but drug is being phased out and replaced with Dexmedetomidine (Dexdomitor) which is packaged at 0.5 mg/ml. They are both dosed at 0.5 mg/kg in rats.

⁵ Atipamezole (Antisedan) is packaged at 5 mg/ml. It will reverse medetomidine and dexmedetomidine in rats and mice at a dose of 0.1 to 1.0 mg/kg SC or IP