

# GadoSpin™ V

## MRI agent for pre-clinical imaging

1 vial (5 x 100 µL injections)  
5 vials (25 x 100 µL injections)

# 130-095-705  
# 130-095-706

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## 1. Description

<b>Components</b>	850 µL GadoSpin™ V, MRI agent (Gd-EOB-DTPA) or 5 x 850 µL GadoSpin™ V, MRI agent (Gd-EOB-DTPA).
<b>Capacity</b>	5 x 100 µL injections or 25 x 100 µL injections.
<b>Product format</b>	GadoSpin V is supplied as a 50 mM gadolinium sterile isotonic solution.
<b>Appearance</b>	Clear, colorless liquid.
<b>Storage</b>	Store protected from light at 2–8 °C. Do not freeze. The expiration date is indicated on the vial label.

For laboratory and animal research use only. Warning: Not for human or animal therapeutic or diagnostic use. Make sure to comply with all laws and regulations governing research on animals.

### 1.1 Background information

GadoSpin V is a gadolinium-based imaging agent of low molecular weight specifically formulated for pre-clinical magnetic resonance imaging (MRI). GadoSpin V increases the signal intensity in T<sub>1</sub>-weighted MRI due to a shortening of the spin-lattice relaxation time (T<sub>1</sub>). After intravenous injection, GadoSpin V accumulates in healthy liver tissue enabling detection of focal liver lesions. The agent is excreted via both the renal and hepatobiliary route.

### 1.2 Applications

GadoSpin V is indicated for use in MRI of small animals, for example mice, to facilitate the visualization of the liver. Examples include detection of focal liver lesions and metastases.

### 1.3 Physico-chemical properties

Molecular weight	Relaxivity (37 °C, 1.5 T)	
	in plasma	in blood
726 g mol <sup>-1</sup>	r <sub>1</sub> = 7 L mmol <sup>-1</sup> s <sup>-1</sup> r <sub>2</sub> = 9 L mmol <sup>-1</sup> s <sup>-1</sup>	r <sub>1</sub> = 7 L mmol <sup>-1</sup> s <sup>-1</sup>

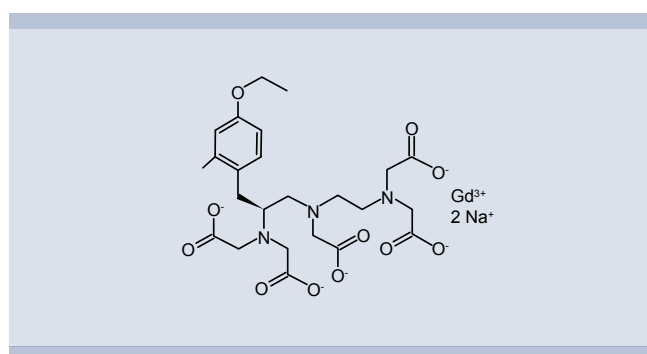


Figure 1: Structural formula of Gd-EOB-DTPA Disodium.

### 1.4 Requirements

- ☞ Sterile syringes and needles (27–30 G)
 

**Note:** To allow sufficient volume for 5 x 100 µL injections per vial, the syringe/needle dead volume should be kept below 70 µL.

**Tip:** Use insulin or tuberculin syringes.
- ☞ 70 % ethanol

## 2. Protocol

### 2.1 Preparation

- ☞ Read the entire protocol before starting.
 

**Tip:** For optimum device settings perform initial studies in a suitable imaging phantom.
- ☞ The imaging agent is ready for injection as provided.
- ☞ For a mouse weighing 20–30 g the typical injection volume is 100 µL corresponding to a dose of 200 µmol Gd/kg body weight (for a 25 g mouse).
 

**Note:** Standard animal-handling procedures and local regulations must be followed.

## 2.2 Injection

- ☞ Disinfect the septum with 70% ethanol. Let septum dry.
- ☞ Warm the mouse tail to dilate the veins and enhance their visibility.
- ☞ Inject GadoSpin V (typically 100 µL) via the lateral tail vein of the mouse.

**Note:** GadoSpin V contains no preservatives. Avoid microbial contamination and discard any unused material after 24 hours.

## 2.3 Imaging

- ☞ Imaging can be performed on a multitude of devices at all commonly used field strengths including high-field MRI.
- ☞ GadoSpin V is particularly suited for T<sub>1</sub>-weighted MRI but can also be detected by T<sub>2</sub>- and T<sub>2</sub>\*-weighted sequences.
- ☞ Taking a pre-contrast image is recommended.
- ☞ Prior to liver imaging a waiting period of 30-60 minutes is recommended.

Find examples of GadoSpin V-enhanced MR images at [www.viscover.berlin](http://www.viscover.berlin).

## 3. References

1. Kiryu, S. *et al.* (2009) Evaluation of gadoxetate disodium as a contrast agent for mouse liver imaging: comparison with gadobenate dimeglumine. *J. Magn. Reson. Imaging* 27(1): 101-107.
2. Freimuth, J. *et al.* (2010) Application of magnetic resonance imaging in transgenic and chemical mouse models of hepatocellular carcinoma. *Molecular Cancer* 9: 94.
3. Yang, L. *et al.* (2020) T1 Mapping on Gd-EOB-DTPA-enhanced MRI for the prediction of oxaliplatin-induced liver injury in a mouse model. *J. Magn. Reson. Imaging* 53: 896-902.

## 4. Related products

GadoSpin™ P	# 130-095-136, # 130-095-137
GadoSpin™ F	# 130-095-162, # 130-095-163
GadoSpin™ D	# 130-095-164, # 130-095-165
GadoSpin™ M	# 130-095-134, # 130-095-135
FeraSpin™ R	# 130-095-138, # 130-095-139
FeraSpin™ XS	# 130-095-140, # 130-095-141
FeraSpin™ S	# 130-095-166, # 130-095-167
FeraSpin™ M	# 130-095-168, # 130-095-169
FeraSpin™ L	# 130-095-170, # 130-095-171
FeraSpin™ XL	# 130-095-172, # 130-095-173
FeraSpin™ XXL	# 130-095-174, # 130-095-175
FeraSpin™ T	# 130-095-703, # 130-095-704

A comprehensive product portfolio for the imaging modalities MRI, CT, US, OI, SPECT, and PET is available at [www.viscover.berlin](http://www.viscover.berlin).

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