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# Single Cannula



## Introduction

Cannula implantation system is an accepted method of acute and chronic intracranial drug administration for animal experiment. Single cannula system includes guide cannula, dummy cannula, internal cannula and fixing screw. Together with our stereotaxic instruments, holders, fixing screws, PE cannulas, injection pumps and other related products, this system provide a set of simple and effective experimental tool of unilateral intracranial administration for neuroscientists. More importantly, we can offer users customized cannulas based on their specific experimental requirements.

## Guide cannula

Guide cannula consists of a threaded cylindrical plastic pedestal and a stainless steel tube and it has to be pre-implanted into brain and fixed with dental cement. Both dummy cannula and internal cannula can be inserted into guide cannula individually.



## Dummy cannula

Stainless steel wire and threaded plastic cap make a dummy cannula. It can be inserted into guide cannula and fixed by the screw to seal the guide cannula and prevent tissue fluid outflow after injection. The length of the stainless steel wire can be customized according to the actual needs.



## Internal cannula

Internal cannula can be fixed into guide cannula through fixing screw and its tail end is connected with PE tube for injections.



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## Fixing screw

Fixing screw fixes internal cannula to guide cannula.



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- A The length of the stainless steel tubing below the plastic pedestal.
- B The height of the cylindrical plastic base.
- C The length of the stainless steel tubing below the plastic pedestal, can be customized.
- D External diameter of stainless steel guide cannulas.
- E External diameter of cylindrical plastic base.
- F1 External diameter of Lock nut.



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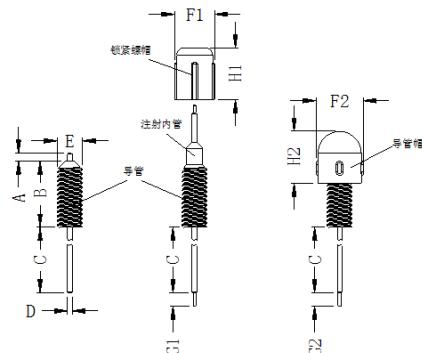
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- H1 Height of Lock nut.
- F2 External diameter of Dummy Cannulas.
- H2 Height of Dummy Cannulas.
- G1 The internal cannulas projection length beyond the guide cannulas tip, can be customized.
- G2 The dummy cannulas projection length beyond the guide cannulas tip, can be customized.



## Ordering instructions

Determine the target area for drug administration according to research requirements and identify the specific depth of the interested nuclei by referring to the rat or mouse brain atlas.

Choose a certain type of guide cannula according to the brain size and the solubility of the drug, and then confirm the length of the guide cannula according to the atlas of the brain nuclei.

The length of the guide cannula refers to the length of the stainless steel tube below the plastic pedestal (marked as C in the diagram). This length of C can be customized. For more information, please refer to ordering information. After confirming the external diameter and length of the guide cannula, the length of the dummy cannula should be defined (see "G2" in the diagram).

Usually, after lock the dummy canula to the guide cannula by screw, the tip of the dummy cannula is flush or protruding 0.5mm. The length of protruding part (G2) can also be customized. (Special note: when 62U002 is used with 62U102, the tip of dummy cannula can flush or protrude, only when the length of the guide cannula is less than 15.20mm)

Determine the length of the internal cannula (see "G1"), usually, when the internal cannula is inserted into the guide cannula, the tip of the internal cannula is flush with or protruding 0.5mm that of the guide cannula. The length of protruding part (G1) can also be customized.

## Ordering number

Matching	Guide cannula	Dummy cannula	Internal canulla	Fixing screw	PE Tube
1	62U001	62U101	62U201	62U501	62U302*
	OD 0,64 x ID 0,45	OD 0,40	OD 0,41 x ID 0,25	OD 5,5 x L 7,5	OD 0,97 x ID 0,58
2	62U002	62U102	62U202	62U502	62U302
	OD 0,56 x ID 0,38	OD 0,30	OD 0,36 x ID 0,20	OD 5,5 x L 7,0	OD 0,85 x ID 0,42
3	62U003	62U103	62U203	62U503	62U302
	OD 0,48 x ID 0,34	OD 0,30	OD 0,30 x ID 0,14	OD 5,5 x L 7,0	OD 0,85 x ID 0,42



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4	62U004 OD 0,41 x ID 0,25	62U104 OD 0,20	62U204 OD 0,21 x ID 0,11	62U504 OD 5,5 x L 7,0	62U302 OD 0,61 x ID 0,28
5	62U005 OD 0,71 x ID 0,41	62U523* OD 5,5	62U205 OD 0,41 x ID 0,25	62U50 OD 5,5 x L 7,5	62U302 OD 0,97 x ID 0,58

\*62U302 PE tubes could be connected to syringes with needle size 0,45-0,65mm in outer diameter.

\*62U523 Dummy cannula should be used together with Dummy cannula 62U105.

Number	Cat. number	Name	Remarks
1	62U510	Screw - M 1,0 x L 2,0 mm	OD 1,0 mm, 2,0 mm in length
2	62U511	Screw - M 1,2 x L 2,0 mm	OD 1,2 mm, 2,0 mm in length
3	62U512	Screw - M 1,4 x L 2,5 mm	OD 1,4 mm, 2,5 mm in length



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