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Trimethoprim (TMP) injection protocol for Rasgrf2 mice

Dose: 0.25mg/g of body weight for 3 consecutive days.

Solvent: DMSO

Delivery: Intraperitoneal injection

TMP stock solution should be prepared every day before injection.

Maximum IP injection volume allowed in mice = 10ul/g; % Weight/Volume in g/100mL.

Notes: TMP has very low solubility in aque

ous solutions so it precipitates in the needle within seconds of mixing with saline and clogs it, recommended doing in pairs. We have had high death rate in mice anaesthetised with isofluorane before injection, do in awake, restrained mice.

Protocol:

- Prepare 10% TMP in DMSO (stock solution):

TMP (mg)	DMSO (mL)
100	1
500	5
1000	10

- Example mouse: 20g
 $20\text{g} \times 0.25\text{mg/g} = 5\text{mg TMP}$
 $5\text{mg} \times 1\text{g}/1000\text{mg} \times 100\text{ml}/10\text{g} = 0.05\text{ml} = 50\text{ }\mu\text{l}$ of 10% TMP in DMSO
 $20\text{g} \times 10\mu\text{l/g} = 200\mu\text{l}$ of total injected volume
 $200\mu\text{l} = 50\mu\text{l}$ of 10% TMP in DMSO + $150\mu\text{l}$ of Saline 0.9% NaCl

Weight (g)	TMP (mg)	Volume (μl) 10%TMP in DMSO	Volume (μl) total DMSO + Saline
15	3.75	37.5	150
16	4	40	160
17	4.25	42.5	170
18	4.5	45	180
19	4.75	47.5	190
20	5	50	200
21	5.25	52.5	210
22	5.5	55	220
23	5.75	57.5	230
24	6	60	240
25	6.25	62.5	250

26	6.5	65	260
27	6.75	67.5	270
28	7	70	280
29	7.25	72.5	290
30	7.5	75	300

Trimethoprim: T7883-25G Sigma Aldrich; DMSO: BP231-100 Fisher