**Co-crystallisation and fine screening of ACVR1 with K62821a, K62980a, and K62981a**

I designed fine screens around the coarse conditions I got crystal hits in, as mentioned in my last blog post:

For ACVR1 with K62821a

* 20 % PEG 8000, 0.1 M CAPSO pH 9.5 (varied the PEG from 10-24 %)
* 10 % PEG 8000, 8 % ethylene glycol, 0.1 M HEPES pH 7.5 (varied the PEG from 4-18 % and the ethylene glycol from 4-10 %)

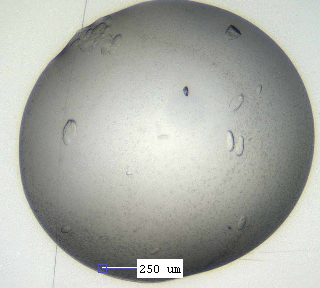
For ACVR1 with K62981a

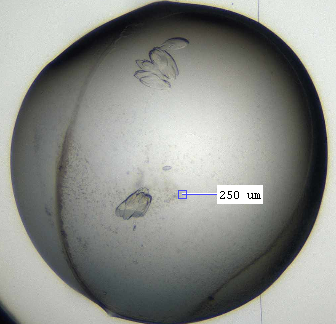
* 50 % ethylene glycol, 0.2 M MgCl2, 0.1 M Tris pH 8.5 (varied the ethylene glycol from 30-60 %)

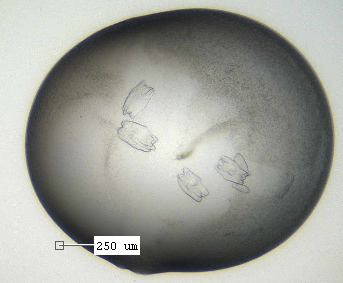
For ACVR1 with K62980a

* 20 % PEG 6000, 10 % ethylene glycol, 0.1 M HEPES pH 7.0, 0.1 M CaCl2 (varied the PEG from 12-26 % and the ethylene glycol from 6-12 %)

I got loads of hits in PEG 8000, 0.1 M CAPSO pH 9.5 (varied the PEG from 10-24 %) (Figure 1) and a couple of hits in 10 % PEG 8000, 8 % ethylene glycol, 0.1 M HEPES pH 7.5 (varied the PEG from 4-18 % and the ethylene glycol from 4-10 %).





**Figure 1. Co crystals of ACVR1 with K62821a**

I mounted two pucks of crystals with cryo at 20 % ethylene glycol and they will be going on the beamline tonight. The diffraction for the crystals I got from the JCSG7 coarse screen was down to 3.5 Å, so hopefully these fine screen crystals will give a bit more data.