

Hi everyone. First thanks for this opportunity and BioEngX, for organizing this event. Tonight I will be giving a talk about how western blotting was used in my research and also sharing some tips on doing western blotting which I hope you all find it useful.

大家好，首先感谢 BioEngX 组织这次活动（Study Club），也很荣幸能获得这次讲座的机会。今晚我会讲一下，Western Blot 在我的项目中的作用，以及分享一些自己操作 Western Blot 的经验。希望对大家有所帮助。

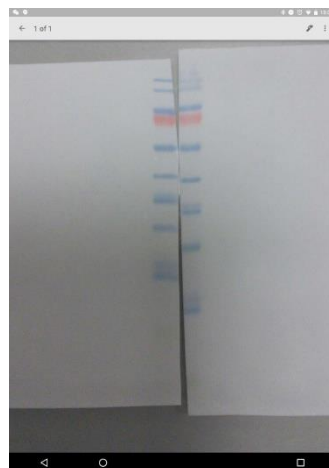
I am Viktor, currently doing my 3rd year PhD study in IcaMB, Newcastle University, UK. I graduated with a 2:1 Biochemistry with Immunology degree in Newcastle 3 years ago, then I started my PhD in the Ribosome Biology group of IcaMB.

我叫 Viktor，目前在英国纽卡斯尔大学细胞与分子研究院就读博士三年级。我三年前本科毕业于纽卡斯尔大学，专业是生物化学与免疫，然后加入了纽卡斯尔大学下属的细胞与分子研究院核糖体生物学课题组开始了博士学业。

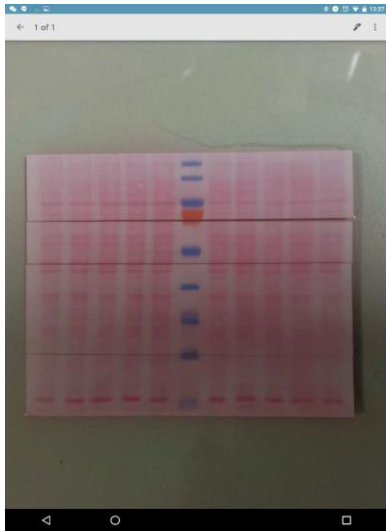
My research mainly focuses on ribosome biogenesis, ribosomal subunit protein/rRNA complexes-p53 signalling and ribosomal protein phosphorylation and function. Ribosome biogenesis consumes the major cellular energy and is essential for cellular survival. Defects in ribosome synthesis results in p53 activation and in turn a majority of cellular stress activating p53 are found associated with ribosome biogenesis. The 5S ribonucleo protein particle (RNP) is an essential ribosomal subcomplex which accumulates in response to cellular stresses. The 5S RNP activates p53 through inhibiting HDM2 function and leads to different cellular responses. Therefore this study could gain us insight on how p53 function could be regulated by ribosomal subunit and could benefits cancer and other diseases treatment.

我博士的课题主要集中在核糖体合成，核糖体亚基蛋白以及核糖体-rRNA 复合体与肿瘤蛋白 p53 之间的信号通路，同时也关注核糖体蛋白磷酸化与功能的方面。核糖体合成会消耗细胞的大部分能量，但同时核糖体对细胞的生存至关重要。核糖体合成过程出错会导致 p53 蛋白激活，

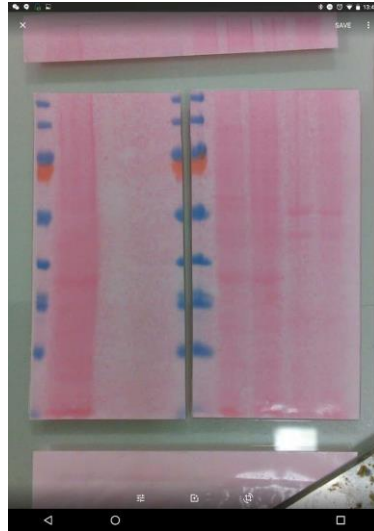
Western blotting is a simple, yet powerful technique for detecting protein specifically
Western blotting is very useful at the following analysis. recombination protein purification
in vitro protein-protein interaction analysis RNA interference efficiency confirmation
cell signalling study: steady protein expression level detection phosphorylation study
- tips for sds-page and western blotting:choose the right percentage of gelloading/internal control a multi-purpose gel



left: 10%; right: 13% SDS-PAGE
bottom marker: 15 kDA red marker - 70 kDA



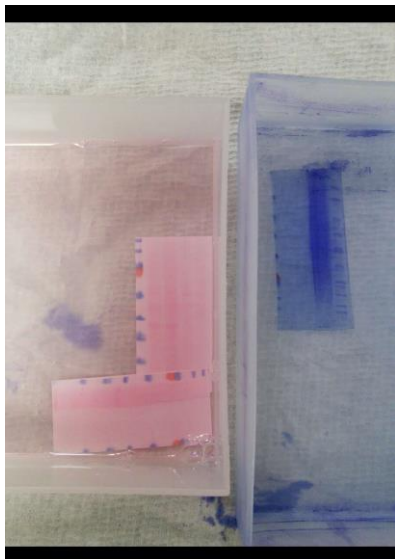
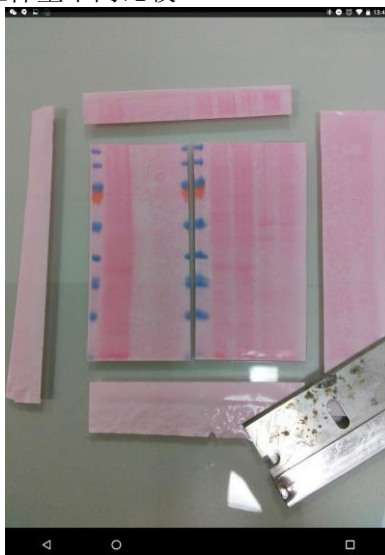
上样量不同比较



上样量不同比较



SDS-PAGE



带梯度的预制胶，叫 gradient gel