



UPPSALA
UNIVERSITET

Molecular Biotechnology Programme

Uppsala University School of Engineering

UPTEC X 14 003	Date of issue 2014-03	
Author	Ara-Shant Migoyan	
Title (English)	Development and evaluation of procedures and methods for Proseek Multiplex	
Title (Swedish)		
Abstract	<p>Contemporary proximity extension assays (PEAs) are used for qualitative protein quantifications in serological samples, with possibilities for scaling assays in multiplex. Medical research can however benefit from robust immunoassays functional for assessing protein levels in other types of biospecimens. Formalin-fixed paraffin embedded (FFPE) tissues have long been used for morphological studies. The proteome encapsulated by extensive cross-linking from formalin fixation has however impeded the development of proteomic analysis from the vast biorepositories FFPE-tissues constitute. In this study, I present a proof of concept for assessing FFPE-samples in multiplex format through PEA. Furthermore, a homogenization and protein extraction protocol for assessing fresh-frozen tissue with PEA is presented, together with a novel sample buffer for which remarkable rises in protein detection can be seen in several protein assays. Together, these findings extend the application area of PEA to tissues together with improved quantification characteristics.</p>	
Keywords	PEA, immunoassay, FFPE, multiplex	
Supervisors	Mats Gullberg Olink Bioscience	
Scientific reviewer	Masood Kamali-Moghaddam Uppsala University	
Project name	Sponsors	
Language	Security	
English		
ISSN 1401-2138	Classification	
Supplementary bibliographical information	Pages	
	41	
Biology Education Centre Box 592 S-75124 Uppsala	Biomedical Center Tel +46 (0)18 4710000	Husargatan 3 Uppsala Fax +46 (0)18 471 4687

