ABSTRACT

This previous work has been performed with UMR-INRA ISP1282 (Nicolas Aubrey). It allows, by the use of CHO (Chinese Hamster Ovarian) protocol cloning to produce in a relative great quantity of the Young Protein or anti-HRP (Horse-Radish Peroxydase) from the sea star IGKappa gene which corresponds to the IPA: Invertebrate Primitive Antibody.

Keywords: Immunology, Protein, Antibody, Cells.

INTRODUCTION

10 years ago, we tried to clone, for the first time, the sea star IGKappa gene by the use and the help of E.coli as amplificator [1]. It allowed, in a second time, to verify that the Young Protein, or anti-HRP Protein recognizes the HRP antigen [1].

But, this verification of the affinity between the IPA (Invertebrate Primitive Antibody) and the antigen, seemed unclear at that time, for many of us. Thus, we decided to operate a new cloning [2] of the IGKappa gene with new parameters and new affinity tests. This second one did not allow to obtain the protein of interest or Young Protein. We attempt, in these conditions, a third assay: It used a CHO protocol, as described in various experiments [3].

RESULTS

First, the percentage of Young Protein production, was greatly ameliorated with the CHO protocol. A best rate occurs when compared to the E.coli one sensu stricto.

A western-blot determined exactly the M.W of the Young Protein, as shown in Figure 1: It is 12,49271 Kda.
DISCUSSION

We think now to perform an Elisa test to verify the affinity between this young protein and the HRP antigen. In first analysis this Elisa seems positive: It would be the second time a primitive invertebrate antibody recognizes the antigen HRP [1]. It’s almost incredible for many immunologists!

We envisage also (My colleagues and me) in a next future, to immunize other sea stars with anti-tumoral antigens to product specific nanobodies [4] from sea stars, against cancer activity (in a general way): sequencing and cloning, after “ll be applicated to obtain a specific recombinant specific protein we ‘ll test against cancerous cells.

We envisage the future with serenity.

REFERENCES


Figure 1. Purification of Young Protein (Production en ExpicHO. Western Blot)