Mini Review Article

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Ipa: About the Invertebrate Primitive Antibody, Its Schema

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Abstract

The schema of sea star Asterias rubens IPA is purposed, for the first time,in this communication, since we discovered it (in 1986): it was isolated.

In 2014, it was asserted by the discovery of IPA gene(Invertebrate Primitive Antibody gene) which matches to human Igkappa gene.

Introduction

In 1986, we discovered the sea star antibody-like; it was isolated and analysed by the mean of biochemistry [1].

Its molecular weight was of 120.000 daltons and was composed of 4 sub-units of 30.000 daltons each, without disulfide bonds. 30 years later, we found an IGKAPPA gene in the sea star (Asterias rubens), the antibody-like became the IPA (Invertebrate Primitive Antibody) [2]. We suggested it was made of 4 KAPPA Light chains. Always later we discovered in the sea star genome a Fab gene, a Fc receptor gene, a Cr receptor gene, at last MHC genes which match to Human genes [3].

Results

We try, for the first time, to imagine the IPA in the following schema (Fig.1): it shows on the cell coat(cc), 4 kappa chains(k) in equal length, the Fab fragment, the Fc receptor which is situated on the sea star lymphocyte side (Ly)

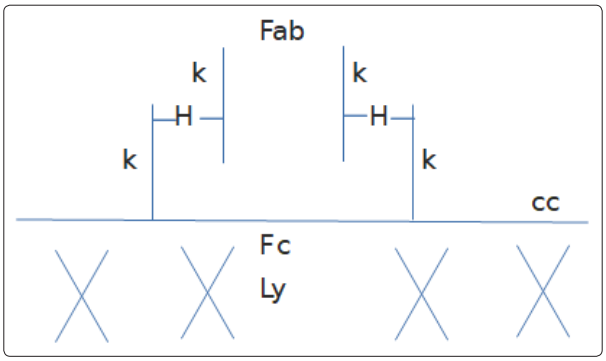

Figure 1: IPA Schema

K: kappa chain; Ly: sea star Lymphocyte; cc: cell coat; H:Hydogen bond; Fab (fragment); Fc receptor

Conclusion

For the first time, we attempt to present the schema of the IPA stucture with many characteristics: 4 kappa chains and Fab fragment. Furthermore we add a Fc receptor
we have imagined hydrogen bonds.This schema, at the same time, causes a feeling of pride and anguish, in front of my responsibility as a scientist.

References

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