Abstract

Immunol Invest. 1991 Aug-Oct;20(5-6):499-506.

The effect of anti-tuftsin antibody on the phagocytosis of bacteria by human neutrophils.

Naim JO[1], Lanzafame RJ, van Oss CJ.

Author information

Abstract

Tuftsin (Thr-Lys-Pro-Arg) is a naturally occurring tetrapeptide which stimulates most known functions of the polymorphonuclear and mononuclear phagocytic cell lines. Although tuftsin is a well characterized bioactive peptide, the exact physiological role tuftsin plays remains unclear. Specific mouse anti-tuftsin antiserum generated in our laboratory, is now available for phagocytosis inhibition studies. Monolayers of human neutrophils were prepared on glass coverslips from a few drops of finger prick blood obtained from a single healthy donor. The monolayers were treated with and without mouse anti-tuftsin antiserum at dilutions of 1:1000 or 1:2000. Exogenous tuftsin (1 microgram/ml) was also added with and without antibody. Treated and untreated neutrophils were subsequently incubated with unopsonized Staphylococcus aureus. The proportion of cells accomplishing phagocytosis (phagocytic index) and the number of bacteria engulfed per cell (avidity index) were recorded. The results showed that exogenous tuftsin increased phagocytosis while the addition of mouse anti-tuftsin antiserum at a 1:1000 dilution inhibited phagocytosis both with and without exogenous tuftsin. This effect was diminished by the antiserum at the 1:2000 dilution. This study reaffirms that tuftsin plays an important physiological role in phagocytosis.

PMID: 1791037 [PubMed - indexed for MEDLINE]

MeSH Terms, Substances

PubMed Commons

PubMed Commons home

0 comments

How to join PubMed Commons