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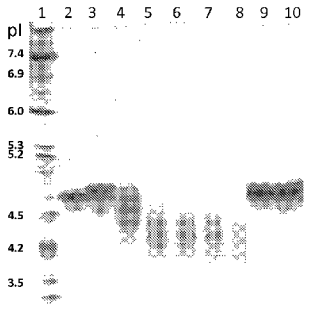
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(54) Title: MODIFICATION AND NOVEL COMPOSITIONS OF HUMAN SECRETOGLOBIN PROTEINS

FIG. 4

Isoelectric focusing of rhCC10 NaOCl reactions



1. IEF marker
2. rhCC10
3. 10 eq NaOCl
4. 20 eq
5. 40 eq
6. 60 eq
7. 80 eq
8. 100 eq
9. 2 eq
10. 5 eq

(57) Abstract: Novel compositions of recombinant human CC10 protein have been generated by chemically modifying the pure protein *in vitro*. Several new synthetic preparations containing isoforms of chemically modified rhCC10 have been generated by processes that utilize reactive oxygen species and reactive nitrogen species. These preparations contain novel isoforms of rhCC10 which have been characterized with enhanced or altered biological properties compared to the unmodified protein. Preparations containing novel isoforms may be used as standards to identify and characterize naturally occurring isoforms of native CC10 protein from blood or urine and ultimately to measure new CC10-based biomarkers to assess patient disease status. These preparations may also be used to treat respiratory, autoimmune, inflammatory, and other medical conditions that are not effectively treated with the unmodified protein.

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