

Monoclonal Antibodies Specific to Cooked Meats

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Reference: Meat antibodies

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Overview

Widespread meat species adulteration has been discovered, particularly among heat-processed meat products and retail meat markets. Such adulteration can have serious health consequences. These antibodies are capable of meat species identification in raw and cooked meats and thus can find use in the detection of species substitution in meats. Additionally, the monoclonal antibodies are useful as an indicator of end-point temperature for cooked meats. Kits containing the antibodies are also provided. This technology has the following potential applications:

- Meat industry
- Food industry
- Meat/food product quality control
- Regulatory control
- Commercial ELISA kits

Advantages

- Quick and inexpensive meat speciation
- Determination of endpoint temperature in cooked meats
- Monoclonal antibodies are more consistent than polyclonals
- Better potential for mass production than current methods

Description

The present invention is drawn to antibodies: monoclonal antibodies or fragments that bind to soluble heat-denatured or heat-degraded meat proteins, as well as to methods for making such antibodies and their uses. The antibodies are capable of meat species identification in raw and cooked meats and thus find use in the detection of species substitution in meats. Additionally, the monoclonal antibodies are useful as an indicator of end-point temperature for cooked meats. Kits containing the antibodies are also provided. Monoclonal antibodies tested to date include pork (raw and cooked), other mammalian meats (5 species) and poultry (turkey and chicken).

Status

- US Patent No. 6,288,215, issued 9/11/01.
- US Patent No. 6,423,506, issued 7/23/02.
- US Patent No. 6,692,930, issued 2/17/04.
- US Patent No. 7,344,848, issued 3/18/08.
- Four different antibodies have been developed and tested to date.

Licensing Opportunities

- This technology is available for exclusive or non-exclusive licensing in certain fields of use.

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