

## Product Data Sheet

# Rat anti-human Ectodysplasin A Receptor (EDAR) monoclonal antibody (GM 1008)

### Product information

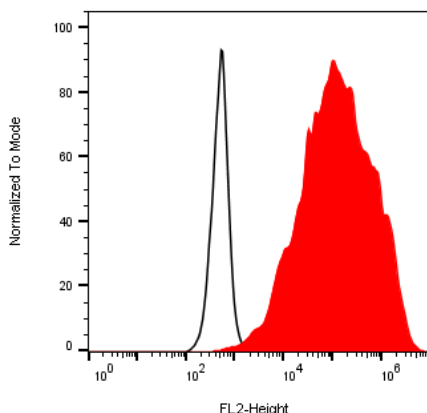
<b>Catalog Number:</b>	GM-1008
<b>Clone:</b>	BGC-6F6
<b>Description:</b>	purified monoclonal rat antibody
<b>Specificity:</b>	anti-human EDAR
<b>Isotype:</b>	IgG2b/kappa
<b>Purification:</b>	Protein G
<b>Storage:</b>	short term: 2°C - 8°C; long term: -20°C (avoid repeated freezing and thawing)
<b>Buffer:</b>	phosphate buffered saline, pH 7.2
<b>Immunogen:</b>	genetic immunisation with cDNA encoding the full-length human EDAR
<b>Selection:</b>	based on recognition of the full-length <b>native protein</b> expressed on viable, transfected mammalian cells

### Working dilutions

<b>Flow cytometry:</b>	1.2 µg/10 <sup>6</sup> cells
<b>ELISA:</b>	1:200 - 1:400
<b>CELISA:</b>	1:200 - 1:400

For each application a titration should be performed to determine the optimal concentration.

### Specificity testing by flow cytometry

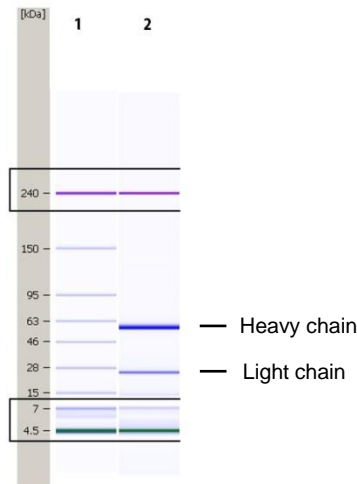


**Fig.1:** GM-1008. BOSC23 cells were transiently transfected with an expression vector encoding either full length human EDAR (red filled curve), or an irrelevant protein (control transfectant, black curve). Binding of BGC-6F6 was detected with a PE-conjugated secondary antibody. A positive signal was obtained only with human EDAR transfected cells.

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## CGE analysis of GM-1008

The antibody was purified by protein G affinity chromatography from cell culture supernatants and verified by CGE (Fig.2).



**Fig.2:** CGE analysis of purified BGC-6F6 monoclonal antibody. Lane 1: molecular weight marker, Lane 2: 2 µg of purified BGC-6F6 antibody. Proteins were separated by CGE (capillary gel electrophoresis, Agilent 2100 Bioanalyzer). Internal control bands (240 kDa / 7 kDa / 4,5 kDa).

## Background

Ectodysplasin A receptor (EDAR) is a protein that is encoded by the *EDAR* gene in humans. EDAR is a cell surface receptor for ectodysplasin A, which plays an important role in the development of ectodermal tissues such as the skin (1). It is structurally related to members of the TNF receptor superfamily. *EDAR* and other genes provide instructions for making proteins that work together during embryonic development. These proteins form part of a signaling pathway that is critical for the interaction between two cell layers, the ectoderm and the mesoderm. In the early embryo, these cell layers form the basis for many of the body's organs and tissues. Ectoderm-mesoderm interactions are essential for the proper formation of several structures that arise from the ectoderm, including the skin, hair, nails, teeth, and sweat glands. Deficiencies in its signaling have been shown to be involved in patients affected by anhidrotic/hypohidrotic ectodermal dysplasia (2).

This antibody is recommended for applications under non-denaturing conditions.

## References

1. **Kowalczyk-Quintas C and Schneider P. (2014).** Ectodysplasin A (EDA) - EDA receptor signalling and its pharmacological modulation. *Cytokine Growth Factor Rev*;25(2):195-203. doi: 10.1016/j.cytogfr.2014.01.004. Epub 2014 Jan 23
2. **Sadier A., Viriot L., Pantalacci S and Laudet V. (2014).** The ectodysplasin pathway: from diseases to adaptations. *Trends Genet* Jan;30(1):24-31. doi: 10.1016/j.tig.2013.08.006. Epub 2013 Sep 23.

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