

# Immorta-MAIT T cell Clone EM-B11 Cell Line

**Catalogue number:** 159687

**Tool type:**

## Contributor

**Inventor:** Marielle Gold ; Erin Meerseier ; Irina Kurtz ; David Lewinsohn

**Institute:** Oregon Health & Science University (OHSU), USA

**Images:**

## Tool details

**\*FOR RESEARCH USE ONLY**

**Name:** Immorta-MAIT T cell Clone EM-B11 Cell Line

**Alternate name:**

**Class:**

**Conjugate:**

**Description:** The Immorta-MAITs are human mucosal-associated invariant T (MAIT) cells. Mucosal-associated invariant T (MAIT) cells are innate-like T cells that are found in blood, liver, lungs, and mucosa and are known to play a role in defence against bacterial and viral infections. These cell lines are clonal and were generated by single cloning methods from healthy thymus tissue not tumour tissue. MAITs have also been shown to potentially play a role in autoimmune diseases such as multiple sclerosis, rheumatoid arthritis, and systemic lupus erythematosus. This cell line expresses the MAIT T cell receptor alpha (TRAV1-2). EM-B11 stains with an MR1-tetramer loaded with a MAIT antigen 5-OP-RU and not control MR1-tetramer loaded with 6FP. This clone expresses CD4, CD8, CD161, and CD27. EM-B11 is a MAIT T cell clone which expresses a T-cell receptor (TCR) described in the image above. There are 9 other Immorta-MAIT cell lines in this collection. Explore our "Related Tools"™.

**Purpose:**

**Parental cell:**

**Organism:** Human

**Tissue:**

**Model:** Immortalised Line

**Gender:**

**Isotype:**

**Reactivity:**

**Selectivity:**

**Host:**

**Immunogen:**

**Immunogen UNIPROT ID:**

**Sequence:**

**Growth properties:** TRAV1-2 is expressed uniformly (determined by flow cytometry staining). This clone expresses CD4, CD8, CD161, and CD27 and can be classified as a double-positive thymocyte. This T cell clone binds the MR1/5-OP-RU tetramer but not MR1/6FP tetramer (negative control). Clone is MR1-restricted in its production of IFN-gamma by ELISPOT test, determined by its response to M. smegmatis-infected A549 cell line but not a M. smegmatis-infected MR1-- A549 cell line.

**Production details:** Generated by single cell isolation of MR1/5-OP-RU tetramer+ cells from a human thymus. Single cells were rapidly expanded into a T cell clone using antibody to CD3 (clone OKT3) and IL-2.

**Formulation:**

**Recommended controls:**

**Bacterial resistance:**

**Selectable markers:**

**Additional notes:**

## Patient details

**Cancer subtype:**

**Cancer stage/grade:**

**Biopsy site:**

**Patient ethnicity:**

**Treatment history:**

## Engraftment details

**Mice passaged?:**

**Engraftment site:**

**Sample type:**

**Host strain:**

**Histology:**

**Genetic data:**

## Target details

**Target:**

**Target alternate names:**

**Target background:**

**Molecular weight:**

**Ic50:**

## Applications

**Application:**

**Application notes:**

## Handling

**Format:** Frozen

**Concentration:**

**Passage number:**

**Growth medium:** These cell lines are not suitable for large-scale expansion following standard cell culture protocols. Following the recommended guidelines the cells should double after a week, after which cells are stable and useable for weeks.

Upon receipt spin cells and resuspend them in 15ml of fresh media and add to T12.5 flask. Recommended media is RPMI supplemented with 10% FBS, L-Glut, gentamicin and 0.5ng/mL IL2. Incubate at 37 °C. Aspirate half the media and replace with fresh media every 3-4 weeks.

**Temperature:**

**Atmosphere:**

**Volume:**

**Storage medium:**

**Storage buffer:**

**Storage conditions:**

**Shipping conditions:** Dry ice

## Related tools

**Related tools:** EM-C5 Cell Line; EM-D5 Cell Line; EM-D6 Cell Line; MG-A4 Cell Line; MG-A11 Cell Line; MG-A11 Cell Line; MG-B4 Cell Line; IK-B12 Cell Line; IK-C1 Cell Line; JK-A8 Cell Line

## References

**References:** Flies et al. 2011. J Immunol. 187(4):1537-41. PMID: 21768399.