

| DESCRIPTION               |  |
|---------------------------|--|
| <b>Species Reactivity</b> | Human  |
| <b>Specificity</b>        | Detects a synthetic peptide around aa 80 in Direct ELISA           |
| <b>Source</b>             | Monoclonal Mouse IgG <sub>2A</sub> Clone # 1079755                 |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant         |
| <b>Immunogen</b>          | HLA-E containing synthetic peptide<br>Accession # P13747           |
| <b>Formulation</b>        | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. |

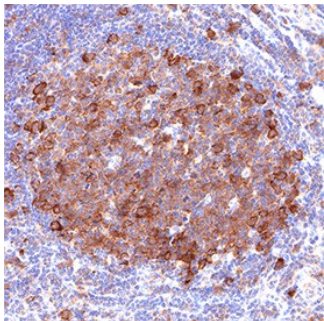
**APPLICATIONS**

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

|                      | Recommended Concentration | Sample   |
|----------------------|---------------------------|--|
| Immunohistochemistry | 3-25 µg/mL                | Immersion fixed paraffin-embedded sections of human tonsil |

**DATA**

**Immunohistochemistry**



**Detection of HLA-E in Human Tonsil.** HLA-E was detected in immersion fixed paraffin-embedded sections of human tonsil using Mouse Anti-Human HLA-E Monoclonal Antibody (Catalog # MAB11547) at 5 µg/ml for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC001) or the HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using VisUCyte Antigen Retrieval Reagent-Basic (Catalog # VCTS021). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to the membrane. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

**PREPARATION AND STORAGE**

|                                |  |
|--------------------------------|--|
| <b>Reconstitution</b>          | Reconstitute lyophilized material at 0.2mg/ml in sterile PBS. For liquid material, refer to CoA for concentration.   |
| <b>Shipping</b>                | Lyophilized product is shipped at ambient temperature. Liquid small pack size (-SP) is shipped with polar packs. Upon receipt, store immediately at the temperature recommended below.   |
| <b>Stability &amp; Storage</b> | <p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul> |

#### BACKGROUND

HLA-E is a class I histocompatibility antigen involved in immune self-nonself discrimination. HLA-E classically binds epitopes from HLA-A, HLA-B, HLA-C and HLA-G signal peptides and serves as a ligand for CD94/NKG2A and CD94/NKG2C receptors on NK and t-cell subsets. HLA-E down-regulates NK cell cytolytic activity when presented on the cell surface. It can also restrict non-canonical CD8<sup>+</sup> T cells during natural infection with pathogens. HLA-E protein expression in normal human nonlymphoid organs is restricted to endothelial cells. It is also basally expressed by B and T-lymphocytes, NK cells and macrophages. TNF-alpha, IL-1beta and IFN-gamma up-regulated cell-surface expression of HLA-EE.

#### References:

1. Sharpe HR, Bowyer G, Brackenridge S, Lambe T. HLA-E: exploiting pathogen-host interactions for vaccine development. *Clin Exp Immunol.* 2019 May;196(2):167-177. doi: 10.1111/cei.13292. Epub 2019 Apr 9. PMID: 30968409; PMCID: PMC6468186.
2. Lin Z, Bashirova AA, Viard M, Garner L, Quastel M, Beiersdorfer M, Kasprzak WK, Akdag M, Yuki Y, Ojeda P, Das S, Andresson T, Naranbhai V, Horowitz A, McMichael AJ, Hoelzemer A, Gillespie GM, Garcia-Beltran WF, Carrington M. HLA class I signal peptide polymorphism determines the level of CD94/NKG2-HLA-E-mediated regulation of effector cell responses. *Nat Immunol.* 2023 Jul;24(7):1087-1097. doi: 10.1038/s41590-023-01523-z. Epub 2023 Jun 1. PMID: 37264229; PMCID: PMC10690437.
3. Coupel S, Moreau A, Hamidou M, Horejsi V, Soullillou JP, Charreau B. Expression and release of soluble HLA-E is an immunoregulatory feature of endothelial cell activation. *Blood.* 2007 Apr 1;109(7):2806-14. doi: 10.1182/blood-2006-06-030213. PMID: 17179229.