



## Human Antigen Processing and Presentation Primer Library

**Catalog No:** HAPP-1  
**Supplier:** RealTimePrimers  
**Lot No:** XXXXX  
**Supplied as:** solid  
**Stability:** store at -20°C

### Description

Contains 88 primer sets directed against antigen processing and presentation genes and 8 housekeeping gene primer sets. Provided in a 96-well microplate (20 ul - 10 uM). Perform up to 100 PCR arrays (based on 20 ul assay volume per reaction) Just add cDNA template and SYBR green master mix.

### Gene List:

- ADRM1 adhesion regulating molecule 1
- CALR calreticulin
- CANX calnexin
- CD1A CD1a molecule
- CD1B CD1b molecule
- CD1C CD1c molecule
- CD1D CD1d molecule
- CD209 CD209 molecule
- CD4 CD4 molecule
- CD74 CD74 molecule, major histocompatibility complex, class II invariant chain
- CD8A CD8a molecule
- CD8B CD8b molecule
- CIITA class II, major histocompatibility complex, transactivator
- CLEC4M C-type lectin domain family 4, member M
- CREB1 cAMP responsive element binding protein 1
- CTSB cathepsin B
- CTSL1 cathepsin L1
- CTSS cathepsin S
- ERAP1 endoplasmic reticulum aminopeptidase 1
- ERAP2 endoplasmic reticulum aminopeptidase 2
- FCGRT Fc fragment of IgG, receptor, transporter, alpha
- HLA-A major histocompatibility complex, class I, A
- HLA-B major histocompatibility complex, class I, B
- HLA-C major histocompatibility complex, class I, C
- HLA-DOA major histocompatibility complex, class II, DO alpha
- HLA-DQA1 major histocompatibility complex, class II, DQ alpha 1
- HLA-DQB1 major histocompatibility complex, class II, DQ beta 1
- HLA-DRA major histocompatibility complex, class II, DR alpha
- HLA-DRB1 major histocompatibility complex, class II, DR beta
- HLA-DRB3 major histocompatibility complex, class II, DR beta 3
- HLA-E major histocompatibility complex, class I, E
- HLA-G major histocompatibility complex, class I, G
- HSP90AB1 heat shock protein 90kDa alpha (cytosolic), class B member 1
- HSPA1A heat shock 70kDa protein 1A
- HSPA1B heat shock 70kDa protein 1B
- HSPA1L heat shock 70kDa protein 1-like
- HSPA2 heat shock 70kDa protein 2
- HSPA5 heat shock 70kDa protein 5 (glucose-regulated protein, 78kDa)
- HSPA6 heat shock 70kDa protein 6 (HSP70B')
- HSPA8 heat shock 70kDa protein 8
- ICAM1 intercellular adhesion molecule 1
- IFNA1 interferon, alpha 1
- IFNA10 interferon, alpha 10
- IFNA13 interferon, alpha 13
- IFNA14 interferon, alpha 14
- IFNA16 interferon, alpha 16
- IFNA17 interferon, alpha 17
- IFNA2 interferon, alpha 2
- IFNA21 interferon, alpha 21
- IFNA4 interferon, alpha 4
- IFNA5 interferon, alpha 5
- IFNA6 interferon, alpha 6
- IFNA7 interferon, alpha 7
- IFNA8 interferon, alpha 8
- IFNG interferon, gamma
- KIR2DL4 killer cell immunoglobulin-like receptor, two domains, long cytoplasmic tail, 4
- KLRC1 killer cell lectin-like receptor subfamily C, member 1
- KLRC2 killer cell lectin-like receptor subfamily C, member 2



- KLRD1 killer cell lectin-like receptor subfamily D, member 1
- LGMN legumain
- LTA lymphotxin alpha (TNF superfamily, member 1)
- MICA In multiple Geneids
- MICB MHC class I polypeptide-related sequence B
- MR1 major histocompatibility complex, class I-related
- NFYA nuclear transcription factor Y, alpha
- PDIA2 protein disulfide isomerase family A, member 2
- PSMB8 proteasome (prosome, macropain) subunit, beta type, 8 (large multifunctional peptidase 7)
- PSMC2 proteasome (prosome, macropain) 26S subunit, ATPase, 2
- PSMC3 proteasome (prosome, macropain) 26S subunit, ATPase, 3
- PSMC4 proteasome (prosome, macropain) 26S subunit, ATPase, 4
- PSMC5 proteasome (prosome, macropain) 26S subunit, ATPase, 5
- PSMD1 proteasome (prosome, macropain) 26S subunit, non-ATPase, 1
- PSMD11 proteasome (prosome, macropain) 26S subunit, non-ATPase, 11
- PSMD4 proteasome (prosome, macropain) 26S subunit, non-ATPase, 4
- PSMD6 proteasome (prosome, macropain) 26S subunit, non-ATPase, 6
- PSME1 proteasome (prosome, macropain) activator subunit 1 (PA28 alpha)
- PSME2 proteasome (prosome, macropain) activator subunit 2 (PA28 beta)
- PSME3 proteasome (prosome, macropain) activator subunit 3 (PA28 gamma; Ki)
- RELB v-rel reticuloendotheliosis viral oncogene homolog B
- SHFM1 Split Hand/Foot Malformation (Ectrodactyly) Type 1
- SLC10A2 solute carrier family 10 (sodium/bile acid cotransporter family), member 2
- TAP1 transporter 1, ATP-binding cassette, sub-family B (MDR/TAP)
- TAP2 transporter 2, ATP-binding cassette, sub-family B (MDR/TAP)
- TAPBP TAP binding protein (tapasin)
- TAPBPL TAP binding protein-like
- THBS1 thrombospondin 1
- UBR1 Ubiquitin Protein Ligase E3 Component N-Recognin 1
- ULBP1 UL16 Binding Protein 1
- ACTB Actin, beta
- B2M Beta-2-microglobulin
- GAPD Glyceraldehyde phosphate dehydrogenase
- GUSB Glucuronidase, beta
- HPRT1 Hypoxanthine phosphoribosyltransferase 1
- PGK1 Phosphoglycerate kinase 1
- PPIA Peptidylprolyl isomerase A
- RPL13A Ribosomal protein L13a

#### Usage

**This product is offered by Biomol for research purposes only. Not for diagnostic purposes or human use. It may not be resold or used to manufacture commercial products without written approval of Biomol GmbH.**