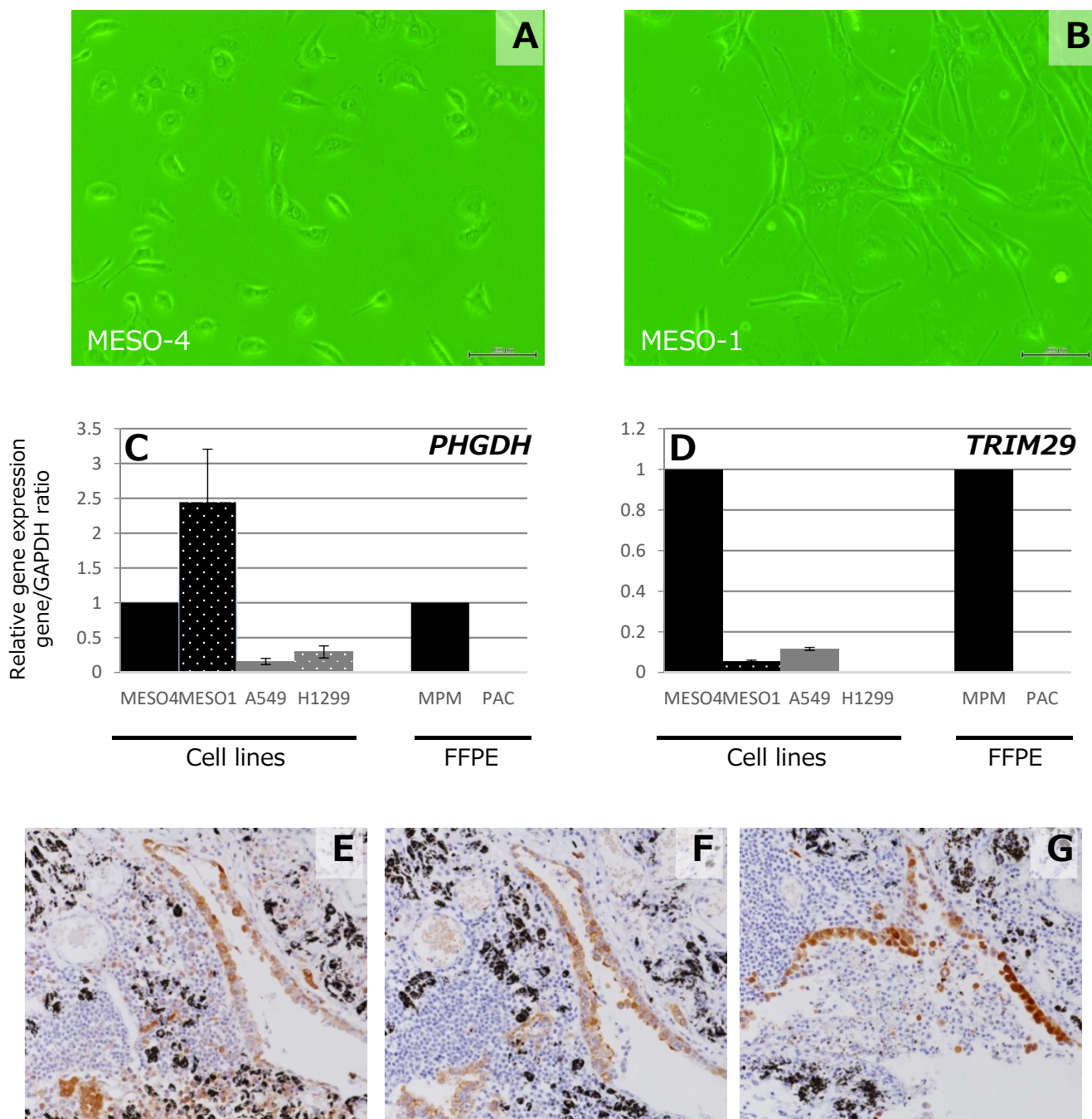


Supplementary Information

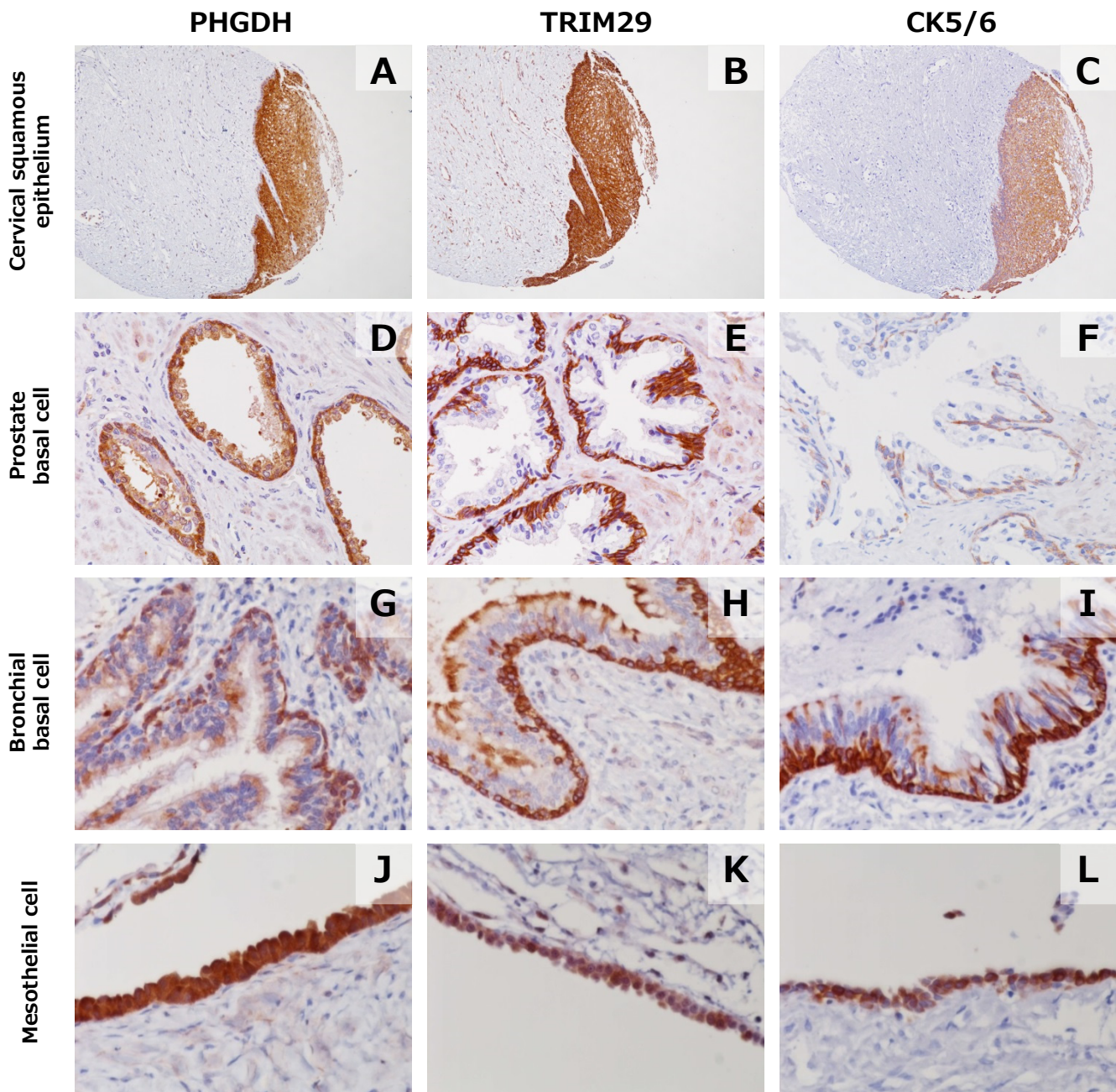
Identification of novel diagnostic markers for malignant pleural mesothelioma using a reverse translational approach based on a rare synchronous tumor

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Supplementary Figure S1 Validation assay of *PHGDH* and *TRIM29* using qRT-PCR with extracted RNA and immunohistochemistry

Alterations in the expression of mRNAs for *PHGDH* (C) and *TRIM29* (D) were validated by qRT-PCR in cell lines and FFPE tissues from the synchronous collision tumor. Expression of *PHGDH* and *TRIM29* was markedly enhanced in the MPM cell lines relative to the PAC cell lines: *TRIM29* showed much higher expression in MESO-4, with an epithelial-like morphology (A), whereas *PHGDH* showed much higher expression in MESO-1, with a fibroblast-like morphology (B). We also found significant upregulation of *PHGDH* and *TRIM29* in MPMs relative to PACs, using RNAs extracted from FFPE tissues of the synchronous collision tumor, being consistent with the microarray data. Immunohistochemistry also revealed positivity for *PHGDH* (E) and *TRIM29* (F) in MPM cells, which were also stained for calretinin (G).



Supplementary Figure S2 Immunohistochemical staining for PHGDH and TRIM29 in non-tumor tissues

Representative immunohistochemical staining patterns in non-tumor samples for PHGDH (A, D, G, J), TRIM29 (B, E, H, K) and CK5/6 (C, F, I, L). PHGDH, TRIM29 and CK5/6 were occasionally detected in the normal squamous epithelium of the uterine cervix (A-C), prostate basal cells (D-F), bronchial basal cells (G-I) and mesothelial cells (J-L).