

Supporting information

In vitro comparisons of microscale and nanoscale calcium silicate particles
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Aim

In order to clarify the CaSi sample absorbing the formazan/isopropanol (IPA) solution.

Methods
















Four analysis conditions (two without cells and two with cell culture) include

- (1) MTT alone: MTT solution in DMEM is directly added to disk samples for 3 h culture and then the solution is taken out for examination of the absorbance by BioTek Epoch spectrophotometer. The samples are also photographed.
- (2) Isopropanol (IPA) alone: IPA solution is directly added to disk samples for 10 min culture and then the solution is taken out for examination of the absorbance by spectrophotometer. The samples are also photographed.
- (3) MTT alone after L929 cell culture: The samples are cultured with L929 cells for 3 days (The samples are photographed.). After sucking out the medium, MTT in DMEM is added to the sample for culturing 3 h and then the solution is taken out for examination of the absorbance. The samples are also photographed.
- (4) MTT + IPA after L929 cell culture (normal MTT assay): Similarly to the (3) group, after MTT reaction with the sample for 3h and then removal of the MTT solution, isopropanol (IPA) is added to each well, followed by dissolving the formazan crystals. The absorbance of the dissolved crystal is taken out and examined by spectrophotometer. The disk samples are also photographed.

Results

From the images shown in Table 1S, it can be clearly seen that except the cells with MTT alone was a typically purple color of formazan, other groups were off white color. It is worth noting that the color of the disk sample in the Cell/MTT+IPA group (the formazan is dissolved by IPA) is also off-white that means the dark purple formazan is not absorbed by the two CaSi materials.

Table 1S Optical images of various test conditions

	No cell: MTT alone	No cell: IPA alone	Cell	Cell: MTT alone	Cell: MTT + IPA
μ CaSi					
nCaSi					
TCP					

In addition, the absorbance values of all groups are shown in Fig. 1S, which shows a remarkable difference in the cell group between MTT alone and MTT+IPA that is due to the dissolution of formazan. Based on the Table 1S and Fig. 1S, it can be speculated that the sample disks did not absorb the formazan/isopropanol solution.

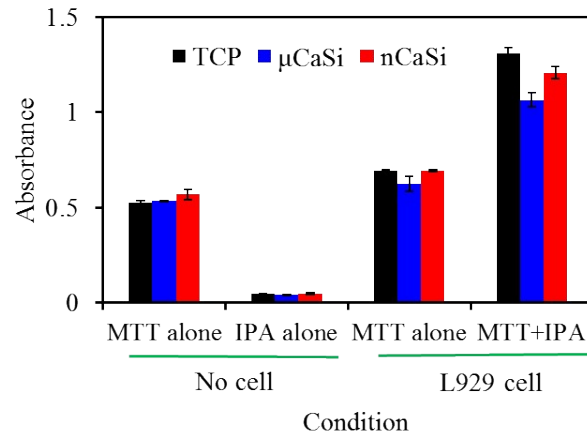


Fig. 1S Absorbance values of all experimental conditions.