```
rep_prod_axiom  THM

⊢  ∀'a,'b:S.
    (λp:'a×'b. λa:'a. λb:'b. (a =_b 1of(p))∧_2(b =_b 2of(p)))
    =
    (@_b rep:'a×'b→'a→'b→𝔹
       ((∀_b p',p'':'a×'b.  ((rep(p')) =_b (rep(p'')))⇒_2(p' =_b p''))∧_2
       (∀_b x:'a→'b→𝔹
          ((his_pair('a; 'b)(x)) =_b (∃_b p':'a×'b. (x =_b (rep(p'))))))))
  by UseWitness * THEN Fiat
END
```