```
sq_stable__is_member  THM

⊢  ∀eq:(T→T→𝔹), x:T, L:T List. SqStable(x(∈eq) L)  by UnivCD
|
1. T : Type
2. eq : T→T→𝔹
3. x : T
4. L : T List
⊢  SqStable(x(∈eq) L)  by ListInd 4
|
|\
| ⊢  SqStable(x(∈eq) nil)
| | by Rewrite (HigherC is_member_unrollC THENC HigherC assert_evalC)
| |    0
| |
| ⊢  SqStable(False)  by Unfold ‘sq_stable‘ 0 THEN Unfold ‘squash‘ 0
| |
| 5. {:True| False }
| ⊢  False  by Analyze 5
|
.\
. 5. u : T
. 6. v : T List
. 7. SqStable(x(∈eq) v)
. ⊢  SqStable(x(∈eq) (u.v))  by Rewrite (HigherC is_member_unrollC) 0
. |
. ⊢  SqStable(if eq(x,u)→ true₂ else x(∈eq) v fi)
. | by GenConcl (eq(x,u) = b)
. |
. 8. b : 𝔹
. 9. eq(x,u) = b
. ⊢  SqStable(if b→ true₂ else x(∈eq) v fi)
. | by BoolInd 8 THEN Rewrite (HigherC ifthenelse_evalC) 0
. |
. |\
. | 8. eq(x,u) = true₂
. | ⊢  SqStable(true₂)
. |   by Rewrite (HigherC assert_evalC) 0 THEN Unfold ‘sq_stable‘ 0
. |      THEN
. |      Unfold ‘squash‘ 0
. |
. .\
. . 8. eq(x,u) = false₂
. . ⊢  SqStable(x(∈eq) v)  by Trivial
END
```