```
hres_exists_wd  THM

⊢  ∀'a:S.
|  all
|  (λP:'a → hbool. all
|                   (λB:'a → hbool. equal
|                                   (res_exists(P,B)
|                                   ,exists(λx:'a. and(P(x),B(x))))))
| by Simpsetp [‘hol_to_nuprl‘] THEN StrongAuto
|
1. 'a : S
2. P : 'a→𝔹
3. B : 'a→𝔹
⊢  (↓_b res_exists('a;x.P(x);x.B(x))) = (∃_b x:'a. ((P(x))∧_2(B(x))))
  by Unab [‘res_exists‘] THEN Simpsetp [‘bequal‘] THEN StrongAuto
     THEN
     Try HypBackchain
     THEN
     StrongAuto
END
```