### Syntax

```stata
type scalar  isdiagonal( numeric matrix A )
```

### Description

`isdiagonal(A)` returns 1 if `A` has only zeros off the principal diagonal and returns 0 otherwise. `isdiagonal()` may be used with either real or complex matrices.

### Remarks and examples

See [M-5] `diag()` for making diagonal matrices out of vectors or out of nondiagonal matrices; see [M-5] `diagonal()` for extracting the diagonal of a matrix into a vector.

### Conformability

`isdiagonal(A):`

- `A: r × c`
- `result: 1 × 1`

### Diagnostics

`isdiagonal(A)` returns 1 if `A` is void.

### Also see

- [M-5] `diag()` — Create diagonal matrix
- [M-5] `diagonal()` — Extract diagonal into column vector
- [M-4] `utility` — Matrix utility functions